



Sequoia and Kings Canyon National Parks

Business Plan



The National Park Service Act

Approved August 25, 1916

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,
That there is hereby created in the Department of the Interior a service to be called the National Park Service...[which] shall promote and regulate the use of the Federal areas known as national parks, monuments, and reservations hereinafter specified by such means and measures as conform to the fundamental purpose...to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.

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Introduction

The purpose of business planning in the National Park Service is to improve the abilities of parks to more clearly communicate their financial status with principal stakeholders. A business plan answers such questions as: What is the business of the parks? How much money do the parks need to operate within appropriate standards? This plan demonstrates the functional responsibilities, operational standards, and financial picture of the parks.

The business planning process is undertaken to accomplish three main tasks. First, it provides the parks with a synopsis of their funding history. Second, it presents a clear, detailed picture of the state of current parks operations and funding. Finally, it outlines the parks' priorities and funding strategies.

A common methodology is applied by all parks developing business plans. The parks' activities are organized into five functional areas, which describe all areas of business for which these parks are responsible. The functional areas are then further broken down into 37 programs. This allows the parks to move beyond the traditional National Park Service method of reporting expenditures in terms of fund sources, and instead report expenditures in terms of activities. As a result, the parks can communicate their financial situation more clearly to external audiences. Furthermore, using the same program structure for all parks provides a needed measure of comparability across park units.

This process is aided by the use of an Electronic Performance Support System, a web-based application that allows parks to complete the data collection, analysis, and document production with step-by-step instruction.

Completing the business plan process not only enables the parks to produce a powerful communication tool, but also provides park management with financial and operational baseline knowledge for future decision-making.

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Superintendent's Foreword

"One touch of nature makes the whole world kin."

John Muir



Superintendent Richard Martin

Interdependence takes many forms at Sequoia and Kings Canyon National Parks. Sierra hummingbirds pollinate *Penstemon* flowers. Algae and fungi live symbiotically within the Staghorn lichen. Black bears eat Manzanita berries and help to propagate new trees. Beyond fostering these ecological relationships, the parks also provide a place for people to join with the environment and with one another.

Sequoia and Kings Canyon depend upon a circle of friends to fulfill the parks' purpose. For this reason, we have chosen alliance-building as the focus for the parks over the next decade. We seek to double the number of individuals and partners who will enjoy, protect and support these Sierra parks.

By working with consultants from the National Parks Business Plan Initiative, our executive team has gained a deeper understanding of the primary drivers that will ensure the parks' future. First and foremost, we must rehabilitate aging infrastructure to respond to heavy demands. Equally important, we need to monitor environmental indicators to ensure biodiversity. Finally, we have to develop stronger ties with our stakeholders – not only visitors, but also volunteers, nonprofit partners, and private donors.

Our long-standing relationships with the Sequoia National History Association (SNHA) and the Sequoia Fund provide examples of how partnerships can work effectively. SNHA promotes public awareness of the national parks through educational programs, publications, and public services. Thousands of individuals benefit from the expertise of SNHA staff at the parks' visitor centers and museum. The Sequoia Fund donates \$100,000 annually for capital investments in the parks. By investing more deeply in these and other partnerships we will generate additional financial

and human resources, including volunteers, in-kind supplies, and unrestricted funds.

Achieving these goals will require hard work, and at times, a departure from our current way of operating. We need both to cut costs and to generate revenue through creative actions such as graduate school research partnerships and corporate sponsorship. We also believe that the parks need better marketing and more personnel who can focus on external affairs.

While the Business Plan process helped us identify our shortfalls, it also helped us recognize ways to leverage our strengths. We continue to champion nationally-recognized research programs in invasive species, air quality, and fire management.

This Business Plan has been an invaluable step in setting our ten-year goals. We took a ground-up approach toward gathering data, asking park staff at different levels to reflect on what it would take to run a top-rate park. We stayed disciplined in the process, using cross-departmental feedback and other parks' benchmarks to come up with figures that make sense.

With the support of you – our partner – we can work together. We will advance our mission for Sequoia and Kings Canyon National Parks in a new era while preserving values established long ago when we became California's first and the nation's second national park.

I welcome your thoughts, and thank you for your participation.

Richard H. Martin
Superintendent

Executive Summary

This Business Plan identifies gaps between current funding levels and operational needs at Sequoia and Kings Canyon National Parks. By undertaking this comprehensive review and planning process, the parks now have a solid understanding of their primary strengths and outstanding needs. The **five key findings** discussed below summarize the parks' most significant challenges and opportunities.

Current funding is not sufficient to cover the parks' operations. In fiscal year (FY) 2002, the parks needed \$36.2 million to cover operational costs, yet they received only \$22.0 million (in addition to \$2.7 million targeted for one-time investments). Appropriated annual funds provided \$12.7 million; most of the remainder came from project funds that are competitively obtained and by their nature unreliable. Increasingly, the parks are depending on these variable funds to pay for basic operating needs.

Facility Operations, Maintenance, and Resource Protection face the largest shortfalls. Only 56% of required funding was available for the operational needs of these functional areas. The parks also have a backlog totaling over \$60 million. This figure represents 1% of the National Park Service's backlog, which exceeds \$6 billion. The operational shortfall in Resource Protection means that mission-critical programs in habitat restoration, inventory and monitoring, and wildlife management cannot move forward.

The parks' natural resources require adequate protection and management. Sequoia and Kings Canyon have developed programs at the vanguard of resource protection in the National Park Service. They have completed projects that promote a balance between tourism and ecological protection. For example, the Giant Forest restoration project removed 282 commercial buildings from a giant sequoia grove,

but the area still welcomes visitors to enjoy the beauty of the trees. The parks' nationally recognized fire program also works to protect natural habitat through prescribed burns and other activities. Despite these success stories, several new challenges have surfaced including invasive species, climate change, and illegal marijuana cultivation, which will require additional resources.

Strategic alliances can increase visitation and generate additional funds. Partnerships provide opportunities for the parks to seek private funding and to maintain programs and services. Friends groups can raise funds through donors, foundations and corporations. Partner groups can assist parks by providing outreach activities, staffing assistance, and educational programs. Although the parks have benefited from the work of the Sequoia Fund and the Sequoia Natural History Association (SNHA), they still lack important connections to individuals and groups in Los Angeles, San Francisco and the Central Valley. Given the changing demographics of California, the parks need to develop new strategies for attracting visitors throughout the state. Sequoia and Kings Canyon have placed a high priority on expanding the work of the Sequoia Fund, increasing the number of park volunteers, and developing new educational partnerships.

Sequoia and Kings Canyon use limited resources efficiently. Even though the parks face the shortfalls mentioned above, they strive to maintain quality services. For example, the parks have reduced ranger employment at visitor centers by utilizing employees from SNHA. The parks employ only two full-time computer professionals to maintain over 300 computers and nine servers. The Maintenance and Facility Operations programs cross-train their utilities employees so that they can respond to a variety of issues. Road workers perform an array of jobs, providing flexibility while also reducing service costs.



"This park is a model to follow. The Park Service is nearing completion of a project to remove structures ... [that] threaten to damage the roots of the sequoias. I propose spending \$1.5 million to help complete this project...[to] offer the young and old alike an opportunity to learn more about the wonders of nature."

President George W. Bush

Park Overview

Park at a glance



Evolution Lake in Kings Canyon National Park.

Sequoia and Kings Canyon National Parks protect a superlative array of natural wonders. Foremost among these are the giant sequoia groves, home to the largest trees in the world. Sequoia and Kings Canyon also boast tremendous vertical relief, ranging in elevation from 1,370 feet in the Sierra foothills to 14,494 feet at the summit of Mount Whitney, the highest peak in the contiguous 48 states. To the north of the parks in the eastern Sierra, Devils Postpile National Monument—which is managed jointly with Sequoia and Kings Canyon—protects one of the world’s few columnar basalt rock formations (please see page 43 for additional information about Devils Postpile).

The United Nations has declared the parks an international biosphere reserve because of their unusual diversity of climates and ecosystems. The arid foothills are dotted with an oak and chaparral scrub forest, while pines and fir trees dominate above the average winter snow line of 5,000 feet. Black bears, mule deer, foxes, and a variety of birds and rodents inhabit these areas. The parks’ 217 known caves are home to small organisms that exist only here, and new caves are still being discovered. In the high country, covered in snow for more than half the year, the landscape consists of granite basins and lakes surrounded by 14,000-foot peaks. This severe environment harbors its own distinctive wildlife.

Visitors to Sequoia and Kings Canyon can explore this rich natural landscape either on brief daytrips or extended excursions into the vast wilderness. The historic Generals Highway winds its way through some of the most popular areas of the parks, including Giant Forest and Lodgepole. Visitors drive this road to access numerous spots for picnicking, day hiking, caving, birding, camping, swimming, backcountry skiing, and rock climbing. The Kings Canyon Scenic Byway passes

by Grant Grove and brings visitors directly into the heart of a glaciated valley cut by the South Fork of the Kings River, one of three nationally designated “wild and scenic” waterways in these parks. Backpackers can explore the parks’ immense, nationally-designated Wilderness on an extensive network of backcountry trails, including large stretches of the famous Pacific Crest Trail and the John Muir Trail.

Before the establishment of Sequoia and Kings Canyon National Parks, the southern Sierra Nevada were occupied for thousands of years by various Native American groups, most recently the Western Mono, Tubatulabal, and Yokuts. Obsidian scatters, bedrock mortars, and petroglyphs bear silent witness to their long presence in the area.

Beginning in the late 1800s, several key individuals began a movement to protect these natural wonders from loggers and other industrialists for the benefit of future generations. John Muir, the foremost conservationist of the time, wrote extensively about threats to the Sierra. George Stewart, considered the father of Sequoia National Park, published several candid editorials in the *Visalia Delta* during the late 1880s that galvanized supporters nationwide to call for the creation of a national park. In 1890 President Benjamin Harrison signed the bill that established Sequoia as the first national park in California and the second in the United States, after Yellowstone.

In the summer of 1903, Captain Charles Young, the acting park superintendent and the only black commissioned officer in the US Army, directed his group of “Buffalo Soldiers” to complete the last stretch of the Colony Mill road to Giant Forest. Thus, 100 years ago, the age of modern tourism began in Sequoia.

Along with increased tourism came a demand for accommodations and services near the most visited site in the parks, Giant Forest. The lodge and village established



Captain Charles Young, America's first black park superintendent.®NAAMCC

among the big trees in the 1920s detracted from the natural setting and harmed the root systems of the sequoias. A decades-long effort to restore Giant Forest to its natural state is now in its final stages (please see page 40 for further details).

Sequoia and Kings Canyon will always struggle to maintain a healthy balance between visitor experience and ecosystem preservation. The parks currently contend with poor **air quality** primarily due to emissions in the rapidly growing Central Valley. **Illegal marijuana cultivation** in remote areas of the parks damages natural ecosystems and harms aquatic wildlife. **Fire management** requires constant vigilance and a deep understanding of the role of fire in natural processes. **Aging infrastructure** must be rehabilitated in the face of limited financial resources. This Business Plan addresses such issues and shows how key stakeholders can help address these critical problems in order to preserve these magnificent southern Sierra parks well into the future.

Enabling Legislation

On September 25, 1890, President Benjamin Harrison signed legislation that established Sequoia as the nation's second national park. One week later, additional legislation nearly tripled the size of Sequoia and established General Grant National Park to protect Grant Grove. In 1940, General Grant was merged into the newly created Kings Canyon National Park. Sequoia and Kings Canyon have been managed jointly since 1943.



Sierra bighorn sheep at Diamond Peak.

Mission Statement

The mission of Sequoia and Kings Canyon National Parks is to protect forever the greater Sierran ecosystem—including the sequoia groves and High Sierra regions of the park and their natural evolution—and to provide appropriate opportunities to present and future generations to experience and understand park resources and values.

Parks Inventory

Natural Features

- 865,258 acres (1,352 square miles)
- 723,006 acres of wilderness
- 14,494 feet at highest point (Mount Whitney)
- 1,370 feet at lowest point (Kaweah River)
- 39 giant sequoia groves
- 217 discovered caves
- 185 miles of canyons and valleys
- 90 miles of Wild and Scenic Rivers
- 7 peaks over 14,000 feet
- 1,469 plant species
- 207 bird species
- 80 mammal species
- 35 reptile and amphibian species
- 2 threatened species (bald eagle, Little Kern golden trout)
- 1 endangered species (bighorn sheep)
- 54 species of special concern

Cultural and Historic Features

- 265 Native American archeological sites
- 69 historic sites

Facilities

- 865 miles of hiking trails
- 14 campgrounds
- 1,406 campsites
- 3 lodges
- 8 picnic areas
- 4 visitor centers and museums
- 129 miles of paved roads
- 494 buildings



Historical Context

Fund source analysis

Sequoia and Kings Canyon National Parks' funding from all sources has grown from \$15.3 million in FY1992 to \$24.7 million in FY2002. Adjusted for inflation, this translates to an annualized growth rate of 2.3%. However, excluding FY2001, total funding has actually declined since FY1999, an adverse trend that is continuing into FY2003.

Funding comes from four sources. **Appropriated Base**, set by Congress, funds permanent staff and recurring operating expenses. **Appropriated Non-base** supports projects and is awarded on a competitive basis. **Reimbursable** funds come from collaborating agencies for which the parks provide services. Visitor fees and donations generate **Revenue** funds.

Appropriated Base

Due to their relatively low variability and dedication to general operations, Appropriated Base funds are the best indicator of the parks' financial stability. Over the past decade, the parks' base budget has declined from 49% of total annual funding (1992-1995 average) to 43% (1999-2002 average). This trend shows that the parks are growing more dependent on less stable sources of funding to meet their financial needs.

Appropriated Non-base

This source usually constitutes between 40% and 50% of the parks' budget, but it has fluctuated more than other sources. In FY2001 the parks received \$20.2 million (56.5% of budget) in Appropriated Non-base funding, while in FY1998 they were awarded only \$4.9 million (28.1%). The FY1998 figure was particularly low because the parks did not receive construction or Federal Highway Administration funding. The FY2001 figure was especially high because of \$7.5 million in Giant Forest restoration expenses. In fact, Giant Forest expenditures have dominated this category over the past decade, accounting for a large share of overall funding fluctuations.

Reimbursable

The parks usually receive between \$500,000 and \$1.0 million (2% to 4% of budget) annually for reimbursable activities. In recent years, this amount has increased due to growing collaborations with the Bureau of Land Management and the National Forest Service on fire management and geographic information systems.

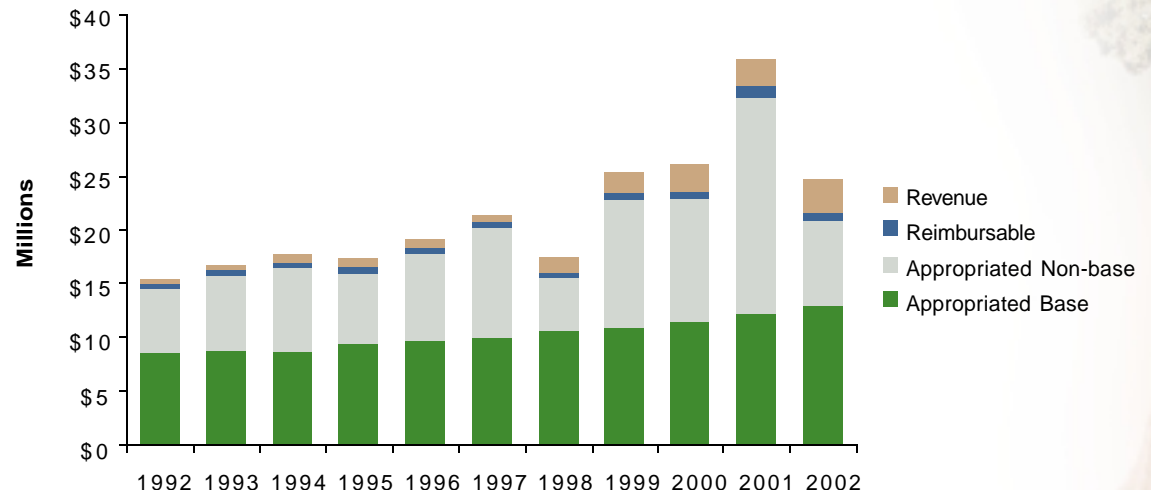
Revenue

Revenue funds have increased from \$746,000 in FY1996 to over \$3 million (12% of budget) in FY2002 primarily because of the Fee Demonstration Program, inaugurated in 1997, which allows the parks to retain 80% of the fees they collect. The parks have made infrastructure improvements, completed resource protection projects and provided educational programs with this money.



Appropriated Non-base sources have funded the Giant Forest restoration.

Historical Expenditures by Fund Source



Adjusted Base Budget

The parks' base funding increases have barely kept pace with inflation over the past two decades.



Base funding pays the salaries of maintenance workers and other personnel.

Appropriated Base funds are intended to cover permanent personnel costs and non-labor expenses necessary for the day-to-day operations of Sequoia and Kings Canyon National Parks. The parks' Appropriated Base budget has grown from \$4.8 million in FY1980 to \$13.0 million in FY2002, which equates to a compound annual growth rate of 3.8%. After adjusting for inflation, this growth rate is only 1.0% per year. Thus, the parks' base funding increases have barely kept pace with inflation over the past two decades.

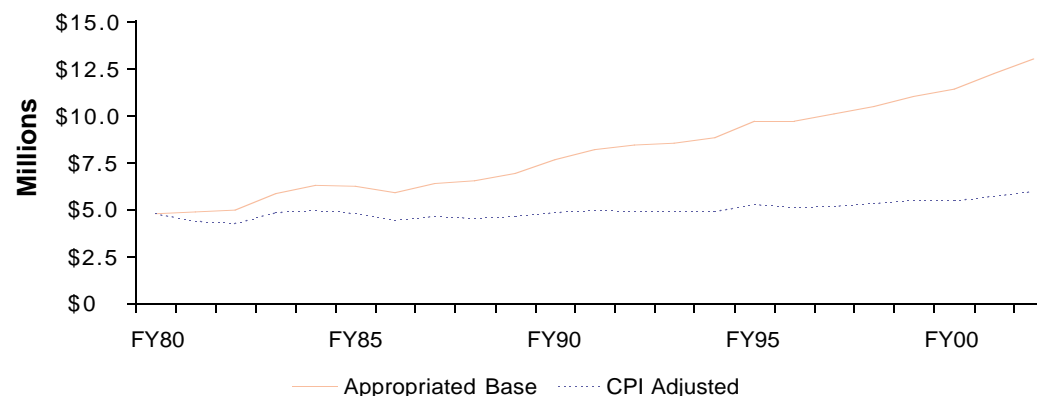
During the 1980s, Sequoia and Kings Canyon's inflation-adjusted base budget remained relatively constant while increased visitation stressed park resources. Beginning in the 1990s, the inflation-adjusted base budget began to grow slightly, though at a pace that has not been able to counteract a steady deterioration of parks services and infrastructure.

Recent variations in base funding include the following:

- **FY2001:** A 7% increase was driven in part by a \$479,000 increase granted through the Natural Resource Challenge, a service-wide program emphasizing research into park ecosystems.
- **FY2002:** An increase of similar magnitude was granted, including \$500,000 earmarked for serving visitors at new facilities in Giant Forest.
- **FY2003:** The inflation-adjusted appropriated base budget decreased by approximately 2.5%. In fact, the FY2003 budget in actual (not inflation adjusted) dollars was less than it was in FY2002, the first time there has been a nominal decline since FY1986.

Projections for FY2004 show a similar decline. A decreased base budget means that the parks will have to find alternative ways to maintain a baseline level of services and accommodate Congressionally-mandated salary increases (typically 3% to 4% per year).

Appropriated Base Budget History



Analysis of Real Growth

The chart below illustrates the increase in the parks' real labor costs between FY1995 and FY2002. This time frame was chosen due to an accounting change prior to FY1995 that makes previous years less comparable to the present.

The National Park Service measures staff time in terms of Full Time Equivalents (FTE), or 2,088 hours of work annually. There were 200.9 FTE paid with base funds at Sequoia and Kings Canyon in FY1995. The chart shows that the inflation-adjusted average compensation for each of these FTE grew from \$41,178 to \$47,243 over this seven-year period, which translates into a 14.7% real increase. In inflation-adjusted terms, these 200.9 FTE cost the park \$1.2 million more in FY2002 than in FY1995. Increasing employee tenure due to an aging workforce partially explains this growth. Other factors are described in the Fixed Cost Analysis on the following page.

Between FY1995 and FY2002, the parks added 13.8 FTE. These new employees, mostly natural resources and maintenance personnel, represent an additional \$652,000 cost to the parks, or approximately one third of the total increase in real labor costs over the period.

Personnel costs are consuming an ever larger share of Sequoia and Kings Canyon's operating budget. In FY1995, personnel costs accounted for 75% of base funding, while in FY2002 they represented 79%. As a result, non-labor items are either being neglected or paid for out of less reliable non-base funding sources, thus compromising some park operations. Inflation-adjusted non-labor funding actually fell by \$22,619 between FY1995 and FY2002. This means that in 2002 there was less base funding to pay for utilities, equipment, travel, and other necessary supplies and services.



Park staff circa 1930.

Operational Costs: Appropriated Base Funding

| | FY 1995 Actual Costs | | FY 1995 Inflation Adjusted | | FY 2002 Actual Costs | | Net Cost Increase | |
|---------------------|-------------------------|-----------------|-------------------------------|-----------------|-------------------------|------------------|----------------------|--------------------|
| | FTE | Average | Total | Average | Total | Average | Total | Total |
| FY1995 Staff | 200.9 | | | | | | | |
| Salary | | \$28,743 | \$5,773,083 | \$33,930 | \$6,814,814 | \$38,060 | \$7,644,355 | \$829,541 |
| Benefits | | \$6,140 | \$1,233,262 | \$7,248 | \$1,455,800 | \$9,183 | \$1,844,406 | \$388,606 |
| Subtotal | | \$34,883 | \$7,006,345 | \$41,178 | \$8,270,614 | \$47,243 | \$9,488,761 | \$1,218,147 |
| New Staff | 13.8 | | | | | | | |
| Salary | | | | | \$38,060 | \$525,228 | \$38,060 | \$525,228 |
| Benefits | | | | | \$9,183 | \$126,726 | \$9,183 | \$126,726 |
| Subtotal | | | | | \$47,243 | \$651,954 | \$47,243 | \$651,954 |
| Total Labor | 214.7 | | \$7,006,345 | | \$8,270,614 | | \$10,140,715 | \$1,870,101 |
| Non-Labor | | | \$2,302,447 | | \$2,717,915 | | \$2,695,296 | (\$22,619) |
| Total | | | \$9,308,792 | | \$10,988,529 | | \$12,836,011 | \$1,847,482 |

Fixed Cost Analysis

Benefits costs will continue to rise as older workers retire and are replaced by staff whose benefits are calculated at the higher rate.

The adjusted base budget of Sequoia and Kings Canyon National Parks has increased by only 1.0% annually in real dollar terms over the past two decades. The benefits of this small increase have been partially eroded by significant cost increases that the parks have had to absorb. Steadily rising salary and benefits costs are evident on the bar chart below. The majority of staff cost increases can be attributed to the following new programs and regulations:

Professionalization of the Workforce

Since 1994, the Park Service has instituted various career initiatives to make the salaries, benefits, and career opportunities for selected professionals more competitive in the marketplace. The primary professionalization initiatives that have affected Sequoia and Kings Canyon include the 1994 Ranger Careers Initiative and Protection Ranger 6C Retirement and Benefits package, the 1994 Administrative Careers Initiative, and the 1999 Resource Careers Initiative.

Changes in Benefits Calculations

In 1984, the Federal Government launched a new employee retirement system, the Federal Employee Retirement System (FERS), which will eventually phase out the Civil Service Retirement System (CSRS). As a result, benefit expenses are budgeted at approximately 12% of salary for employees hired before 1984 and 35% of salary for employees hired since 1984. Benefits costs will continue to rise as older employees retire and are replaced by staff whose benefits are calculated at the higher rate.

Federally Mandated Pay Increases

Federal employees received a 4.7% increase in pay in FY2000, but Sequoia and Kings Canyon's base appropriation increased by only 3.6% that year. A pay increase of similar magnitude was granted for FY2003, a year in which the parks' base budget actually declined. If Congress does not appropriate enough money to accommodate federally mandated pay increases, park services and programs will be squeezed.

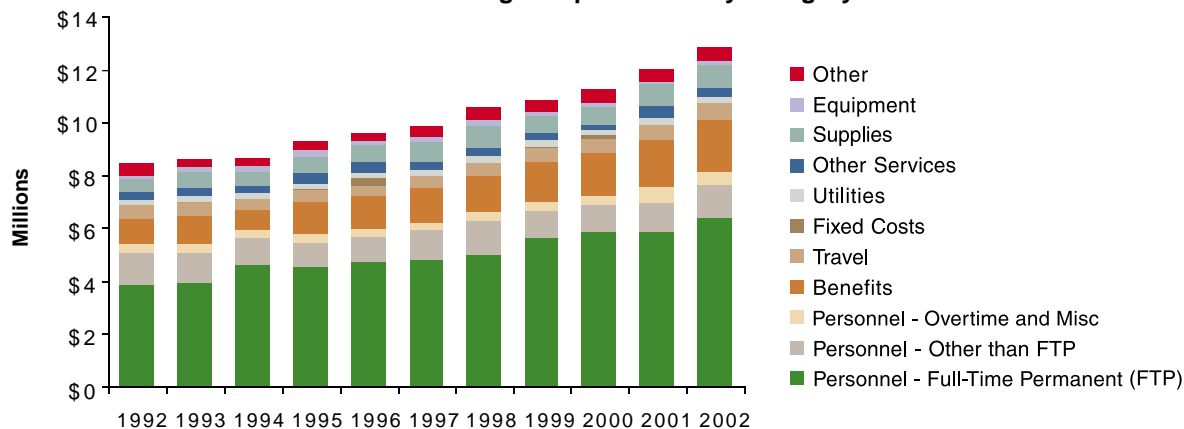
Seasonal Employment Rule Change

The Office of Personnel Management recently enacted a Seasonal Employment Rule Change that limits the seasonal employment designation to employees working less than half the year. Employees who work more than this limit must be reclassified as full-time employees and are thus eligible for benefits.

Training Requirements

The Federal government has mandated an increase in specialized training in law enforcement, fire protection, contracting and human resource activities. Many of these changes are a result of increased national security, terrorism preparedness, competitive sourcing, increasingly sophisticated programs, and the need to maintain a competitive workforce.

Historical Base Budget Expenditures by Category



Analysis of Expenditures

This graph breaks down Sequoia and Kings Canyon National Parks' total expenditures over the past decade and demonstrates significant variation in specific budget categories and the budget as a whole. For example, the parks' FY2001 budget was more than double their unusually low FY1998 budget. Such fluctuations are largely due to funding dedicated to specific projects that tend to affect the Fixed Assets and Other Services categories of expenditures.

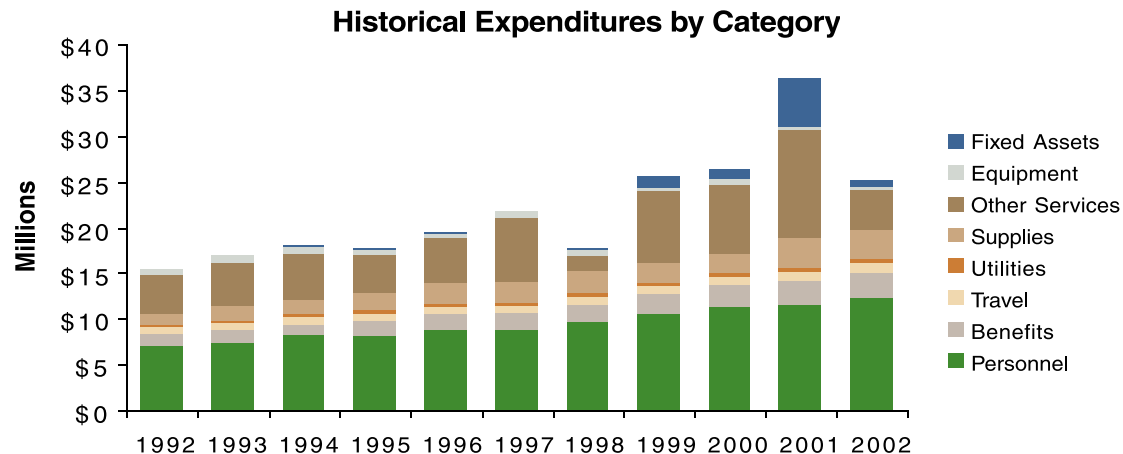
While the parks' infrastructure benefits from one-time project funds, large variations in funding from year to year may adversely affect long-term parks operations. Hidden costs of intermittent projects may include hiring and training new employees who will only work in the parks for a short time. In addition, one-time projects often utilize resources typically dedicated to the daily operations and maintenance activities that the parks need to function smoothly in the long run.

The Fee Demonstration Program has played a role in increasing expenditures on Fixed Assets and Other Services. Since FY1997, the parks have been able to keep approximately 80% of the funds collected at entrance stations and campgrounds for use in projects ranging from infrastructure rehabilitation to resource studies. These projects, which have a total value of \$16 million to date, sometimes involve the use of contractors, whose labor falls under the Other Services category. They may also reflect infrastructure investments and be partially classified as expenditures on Fixed Assets.

The rehabilitation of Giant Forest was primarily funded with Appropriated Non-base construction dollars. This project also increased the ratio of Fixed Assets to total expenditures and boosted expenditures on Other Services. The funding spike in FY2001 is attributable to over \$7.5 million in Giant Forest expenditures. In fact, fluctuations in Giant Forest expenditures have had a significant influence on Fixed Assets and Other Services throughout the period shown on the bar chart.



Fee Demonstration revenue enables the parks to invest in capital improvements.



Visitation



The Ash Mountain entrance station in 1927.

Over 920,000 people visited Sequoia National Park and over 540,000 visited Kings Canyon National Park in 2002. The combined figure of 1.46 million is an overestimate of total visitation because many people visit both parks on the same trip. However, a 3.8% increase in visitation over the 2001 total of 1.41 million is an accurate estimate assuming that visitation patterns remain relatively constant over time. During the same year, visitation at all national parks across the country fell by approximately 1%.

Sequoia and Kings Canyon are expected to continue to outpace average visitation growth because of several factors, including population growth. Over two-thirds of visitors to the parks are Californians, and the Census Bureau projects that the state's population will grow from 33 million today to 49 million in 2025—a 50% increase in just over 20 years. The adjacent San Joaquin Valley is projected to grow over 60% during the same period.

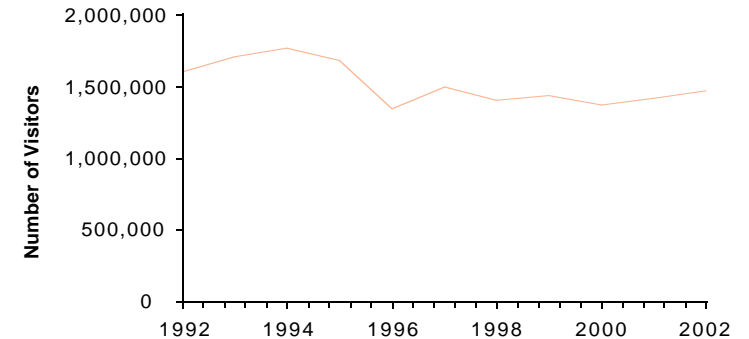
Furthermore, Americans are staying closer to home for their travels due to the current international situation, and the parks are the closest high alpine escape for the large population in the Los Angeles basin.

Visitation was relatively stable during the past decade partly because of major construction and disruption caused by the Giant Forest renewal project. With the demolition of the lodge in Giant Forest, the number of visitor rooms in the area fell from 250 to 100, but this number will increase with the expansion of the Wuksachi Lodge. Major maintenance on Generals Highway also adversely affected visitation during some years.



The Ash Mountain entrance station in 2003.

Historical Visitation



International tourists comprise 10% of park visitors, led by the Germans, English, and Dutch. Another 10% of visitors are Hispanic, and this group is expected to account for a growing share of visitation in future years. There is also a trend toward increasing day use and decreasing overnight use, which will require an evaluation of programs that should be offered to meet emerging visitor demands. The parks are already planning an internal transportation system that will reduce congestion on parks roads, as almost all visitors arrive in private cars.

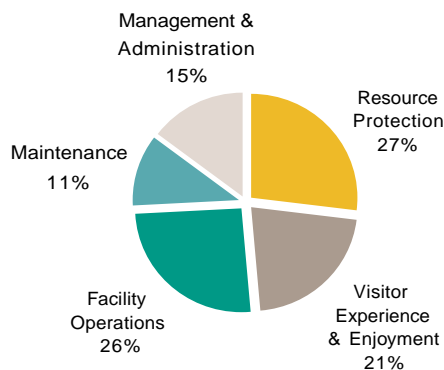
Most visitors come to the parks during the summer months; in 2002, over 77% arrived between May and October. On summer weekends, almost all campgrounds and lodges are at full capacity. With projected visitation increases, the parks will need to stretch their financial and human resources further to ensure a safe and enjoyable experience for all visitors.

Current Park Operations

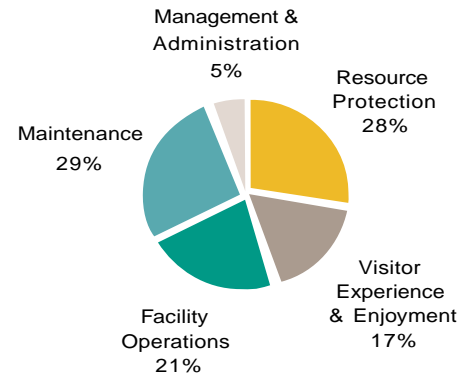
This Business Plan differentiates between two types of expenditures: Operations & Maintenance, and Investments. Operations & Maintenance requirements are those funds needed to carry out everyday operations at the parks. Some examples include annual payroll costs, janitorial operations, and telecommunications network management.

On the other hand, investments are significant one-time costs that parks incur in order to fix current problems or provide for future development. Investments may include projects such as a resource inventory necessary to establish a credible baseline before beginning a monitoring program, as well as constructing a new building. This section of the plan focuses on the Operations & Maintenance activities of the parks. In order to describe operations for this Business Plan, parks activities were divided into five functional areas, which describe the five areas of business for which the parks are responsible. The five functional areas are Resource Protection, Visitor Experience & Enjoyment, Facility Operations, Maintenance, and Management & Administration.

FY2002 Expenditures by Functional Area



FY2002 Shortfall by Functional Area



These areas are then further broken down into 37 programs that more precisely describe parks operations. Programs are general in order to cover a broad suite of activities that should be occurring in the parks.

The next component of the business planning process is the completion of a detail sheet for each program. These forms describe the day-to-day activities occurring in the parks and the totality of financial need associated with them.

Statements of work are developed to describe the activities encompassed by the program. Then operational standards are generated to describe the duties and responsibilities required to meet the critical functions of the program as stated in the statement of work. These standards are then used to determine the total financial resources required to perform the standard tasks of the program. The final step is to compare current parks activities to the operational standards to identify the gaps between required and available resources.

The following pages discuss each of the functional areas in detail.

Resource Protection

Activities relating to the management, preservation and protection of the parks' cultural and natural resources. Activities include research, restoration efforts, species-specific management programs, wildland fire management, archives and collections management, historic site protection, and information integration activities.

Visitor Experience & Enjoyment

All activities directly related to providing visitors with a safe and educational experience while at the parks. This program includes all interpretation, visitor center management, interpretive media, in-park concessions management, fee collection, and visitor safety services.

Facility Operations

All activities required to manage and operate the parks' infrastructure on a daily basis. Buildings, roads, trails, utilities, and campgrounds require a range of operational activities from basic sanitation to snow plowing to water testing.

Maintenance

Activities directed solely at prolonging the life of the parks' assets and infrastructure through substantial repair, replacement or rehabilitation of park assets, such as buildings, roads, trails, utilities, fleet vehicles, and equipment.

Management & Administration

All parks-wide management and administrative support activities. It includes all parks communications and external affairs activities, planning, human resource management, information technology, parks leadership, and financial management.

Resource Protection



Smog from the Central Valley threatens the parks' natural resources.

Sequoia and Kings Canyon National Parks contain unique geological, biological and archeological resources. Programs in the Resource Protection functional area seek to preserve these resources through monitoring, inventorying, protecting and understanding them. These programs include Cultural Resource Management, Information Integration and Analysis, Wildland Fire Management, and Natural Resource Management. Categories within Natural Resource Management include Forestry and Vegetation, Aquatic and Wildlife Resources, and Air and Geologic Resources. In FY2002, expenditures in Resource Protection totaled \$5.9 million, and accounted for 26.9% of the parks' total budget. The shortfall in this functional area was \$3.9 million and 65.2 FTE.

Forestry and Vegetation Management

Sequoia and Kings Canyon are home to over 1,400 vascular flora species, ranging from tiny mosses to giant sequoias. The Forestry and Vegetation Management program protects 39 giant sequoia groves and 26 species identified as high priority sensitive plants. The program faces three primary challenges: control of invasive species, ecological restoration, and management of hazardous trees. An estimated 15% of plant species are non-native. These invasive plants often destroy the habitat for native organisms. Personnel address these and other problems through inventory, mapping and eradication projects. In addition, Forestry and Vegetation Management staff manages hazardous trees in developed areas, campgrounds, and other permitted areas. In FY2002, these two programs needed 12.0 additional FTE to protect and serve parks resources and visitors.

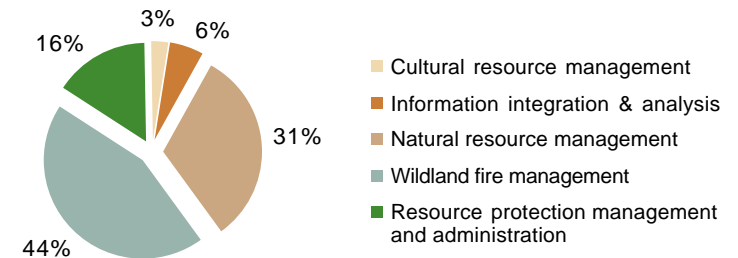


The Cultural Resources program studies bedrock mortars and other artifacts.

Aquatic and Wildlife Resources

Historically, the parks have expended significant resources to manage adverse interactions between people and wildlife. For instance, the bear management

Resource Protection FY2002 Expenditures by Program



| Total Required | | Available | | Shortfall | |
|----------------|-------------|-----------|-------------|-----------|---------------|
| FTE | Funds | FTE | Funds | FTE | Funds |
| 157.7 | \$9,800,335 | 92.5 | \$5,923,459 | (65.2) | (\$3,876,877) |

program has reduced the number and severity of incidents between people and bears. Staff also strives to protect the parks from invasive species. The parks contain 58 animal species listed as threatened, endangered or special concern. Another 25 newly introduced animal species – including brown-headed cowbirds, feral pigs and beaver – are disrupting the ecosystem.

Technicians and rangers need to improve the bear program with tighter controls on food, better law enforcement and more extensive visitor education. They also need to identify and halt invasive species early on to prevent extensive spreading. While it has supplemented work teams with volunteers, the program needs a day-to-day operations manager, technicians, and additional personnel for monitoring.

Air and Geologic Resources

Sequoia and Kings Canyon experience some of the worst air quality in the United States. The pollution damages the parks' natural resources and diminishes people's health. For example, ozone damages ponderosa and Jeffrey pines by reducing photosynthetic rates, which in turn stunts the trees' growth. The Air program attempts to minimize the effects of pollution; employees also educate other staff and visitors about the parks' air quality. Current levels of funding support data collection and education efforts. Additional financial resources would allow the program to further its goals of greater research and education on air quality issues.

With over 200 caves, the underground world of the parks contains some of the least understood natural resources. The Cave Management program comprises two FTE, some seasonal support, and a hearty volunteer crew that augments staff efforts by 70% of their total work hours. The parks' cave experts have discovered nearly 20 unique species of invertebrates in the caves, including four caves which are roosts for a rare bat subspecies. Additional staffing would equip the cave management and conservation program with more resources for inventorying and monitoring, preparing management plans, and educating the public about caves.

Wildland Fire Management

Sequoia and Kings Canyon have an active fire and fuels management program that promotes and maintains healthy forest ecosystems. The program carries out activities in operations, monitoring, research and education. Field staff performs on-the-ground fire management tasks such as fire suppression and prescribed burning. Scientists study the effects of fire and provide ecological facts about the southern Sierra. Educators share information about the parks' fire program with visitors, local community members and parks employees. The field

staff and scientists work together to plan and implement fire activities in the parks. They also develop and revise fire management practices. An additional \$1.1 million and 23.5 FTE were needed in FY2002.

Information Integration and Analysis

The Geographic Information Systems (GIS) and Data Management programs administer geospatial data and provide technical assistance to other divisions within the parks. They also train staff in data collection, interpret incoming information, perform research inventories, and disseminate findings to outside agencies. GIS wildfire maps provide real-time information for fire crews, resource managers, interpretive rangers, and public affairs staff. In FY2002, the programs needed an additional \$350,000 and 4.2 FTE to further geospatial data management in the parks.

Cultural Resource Management

The parks contain 265 prehistoric sites and 69 historic sites, including Native American villages, bedrock mortars and basins, logging camps, sawmills, mines, and 1930s era structures. The archeological evidence dates back at least 5,000 years and indicates a wide-ranging presence of Native American peoples. The Cultural Resource Management program inventories, protects, and interprets these sites, and maintains a museum collection of over 320,000 items. Additionally, the program supports activities that foster the appreciation and perpetuation of native peoples' cultural practices. The program coordinates activities with the prescribed fire program and the Maintenance program to preserve cultural and historic sites. In FY2002, \$237,000 and 3.7 additional FTE were required to survey wilderness areas of the parks and conduct research on cultural landscapes and ethnographic resources.



A staff scientist gathers data on a bear that has become habituated to human food.

Reducing Problems Between Bears and People

Bear activity in campgrounds poses a serious threat both to people and bears. In fact, many bears do not survive once they become a menace to the park. Since 1951, the regional office has required bear-proof garbage cans as well as extensive written and verbal public education for visitors. Additionally, since 1982 the parks have installed thousands of food storage lockers – invented by a Sequoia and Kings Canyon scientist – at campgrounds, parking lots and backcountry sites. The parks also rent portable bear food canisters for backpackers. These preventive measures have vastly reduced the number of bears that the natural resource program has to relocate, monitor and, as a last resort, euthanize.

Visitor Experience and Enjoyment



Rangers protect visitors and park resources.

Visitors come to Sequoia and Kings Canyon National Parks for a variety of recreational activities including sightseeing, picnicking, backpacking, and backcountry skiing. Employees in the Visitor Experience and Enjoyment functional area strive to ensure that all guests have a safe and satisfying visit. Additionally, interpretive and law enforcement rangers educate visitors about the value of natural ecosystems and parks. In FY2002, the programs in this area spent \$4.8 million, accounting for 21.6% of the parks' operational budget. The identified shortfall in Visitor Experience and Enjoyment was \$2.4 million and 27.7 FTE. Because ensuring a memorable visitor experience is one of the two primary objectives of both the National Park Service and Sequoia and Kings Canyon, overcoming this shortfall is a top priority.

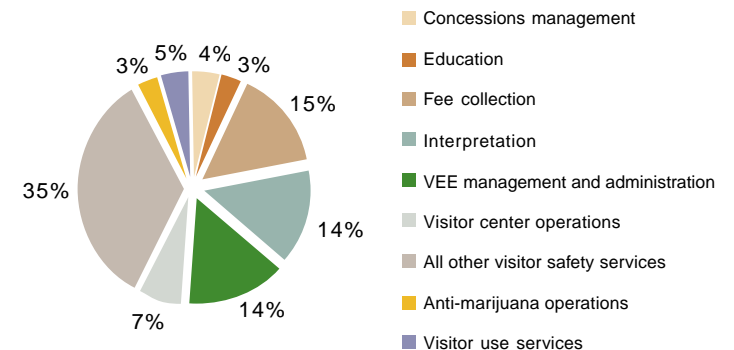
Visitor Safety Services and Anti-Marijuana Operations

This complex program includes search and rescue (SAR) operations, emergency medical services (EMS), and traffic and law enforcement patrols. A ranger workforce already responding to multiple demands—including an average of 50 SAR/EMS and 800 law enforcement incidents per year—faces a growing challenge: the cultivation of marijuana in some of the parks' remote foothill regions. In 2002, rangers eradicated approximately 34,000 plants totaling 15 tons of marijuana, an 800% increase over any previous year. Due in part to this daunting challenge, the funding gap for Visitor Safety Services is large. In FY2002, 17.4 FTE and \$1.4 million were needed to address the marijuana problem (the parks' overall number one operational priority), protect park resources, educate visitors about safety, respond to emergencies throughout the parks, and replace deteriorating equipment. The program presently lacks the money to rent a new ambulance for the Lodgepole district, the most active emergency medical service area in the parks, so it operates an older, failing vehicle instead.



Visiting elementary school students gather data on the forest ecosystem.

Visitor Experience and Enjoyment FY2002 Expenditures by Program



| Total Required | | Available | | Shortfall | |
|----------------|-------------|-----------|-------------|-----------|---------------|
| FTE | Funds | FTE | Funds | FTE | Funds |
| 125.2 | \$7,159,229 | 97.5 | \$4,766,713 | (27.7) | (\$2,393,516) |

Visitor Use Services

Over 75,000 people annually explore trails and terrain beyond the developed areas of Sequoia and Kings Canyon. To serve these visitors and protect backcountry resources, the parks operate a wilderness office, trailhead permit stations, and several wilderness stations. Staff manages the permitting process and educates backpackers about safety and low-impact practices. The \$71,000 and 1.4 FTE gap represented the need for more seasonal trailhead rangers as well as additional support for backcountry stations. Only 12 of 16 stations were utilized due to lack of resources in 2002, reducing the effectiveness of rangers to respond to incidents and provide resource protection during the high-use season.

Interpretation and Visitor Center Operations

The Interpretation program at Sequoia and Kings Canyon consists of formal activities such as guided hikes, evening programs, and educational demonstrations for children. Informal activities include roving visitor contacts and question-and-answer sessions that allow visitors to have meaningful interactions with rangers and learn about the importance of preserving natural ecosystems. Some interpretation staff members develop a wide variety of media that educate people about park resources, including visitor center exhibits, brochures, seasonal park newspapers, and outdoor exhibits. Interpretive rangers staff the parks' four major visitor centers: Foothills, Grant Grove, Lodgepole, and the Giant Forest Museum. Following a trend at other national parks across the country, Sequoia and Kings Canyon have lowered expenditures by reducing staffing at visitor centers, substituting cooperating association employees for park employees.

The FY2002 gap of 3.6 FTE and \$401,000 in Interpretation and Visitor Center Operations represented several needs. The parks require additional seasonal rangers to meet demand for day and evening interpretive programs at Wuksachi, Potwisha, Mineral King, and Dorst Creek. One FTE is needed to spearhead the development of exhibits at the Grant Grove and Lodgepole visitor centers and throughout the rest of the parks. The Interpretation program also coordinates the parks' public website and requires a full-time webmaster to keep site content current.

Education Services

In 2002, Sequoia and Kings Canyon interpretive rangers presented 68 curriculum-based educational programs to 1,725 second-through-sixth graders from schools in 20 nearby towns and cities. Program topics included geology, ecology, native cultures and archeology, and the life cycle of the giant sequoia. Demand for such programs

exceeds 3,000 students annually, but the Education program lacks the resources to conduct more extensive outreach. Two full-time education coordinators could help to bridge the \$188,000, 3.5 FTE gap.

The Education program connects the parks to Central Valley communities. In addition to stimulating awareness among students, children who visit on educational field trips are given entrance fee waivers for their families, who may have never visited the parks. Other specialized programs target inner-city youth, high school students interested in math and science, and students attending summer camps in nearby national forests.

Concessions Management

Several private companies are authorized to operate within the parks and provide services that contribute to visitor experience and enjoyment. Concessionaires' services include lodges at Wuksachi Village, Grant Grove, and Cedar Grove, food and beverage outlets, gift shops, general merchandise sales, guided tours, riding stables, and backcountry packing services. The parks' concessions management team plans for future services, evaluates prices, inspects products and facilities, and negotiates contracts. Due to shortfalls in other programs, Concessions Management staff is sometimes diverted to other management tasks. This has created a slight gap in resources for the program.

Fee Collection

In addition to operating the entrance stations at Ash Mountain and Big Stump, the fee collection program is responsible for managing campground fees, as well as motion picture and other special use permits. While the Fee Collection program has sufficient operational funding, the lack of resources in Visitor Safety Services means that entrance stations must sometimes shorten operating hours. Protection rangers are needed to conduct patrols around entrance stations to ensure worker and visitor safety.

Collaborating for Visitor Experience and Resource Protection

The eastern half of Sequoia and Kings Canyon lies beneath the R-2508 Complex, the most topographically diverse military airspace in the lower 48 states. In the past, wilderness areas of the parks were disturbed by low-level Air Force and Navy overflights that deviated from existing 3,000 feet-above-ground-level altitude restrictions. The noise generated by the aircraft violated the serenity of these undeveloped areas and was damaging to wildlife. The key to resolving this issue was the effort by the Park Service, the Air Force, and the Navy to understand each other's missions, resources, and priorities. Sequoia and Kings Canyon's management invited military officials to participate in annual backcountry trips and observe the disturbance caused by the overflights. As a result, in June 2000 the Department of Defense placed a floor of 18,000 feet on all aircraft using the R-2508 Complex. The number of annual deviations from the altitude restrictions has fallen from an average of 50 to approximately five.

Facility Operations



A hiker enjoys a rock staircase built by the parks' trail crew.



The parks' animal caretaker makes necessary repairs to extend the life of a costly saddle.

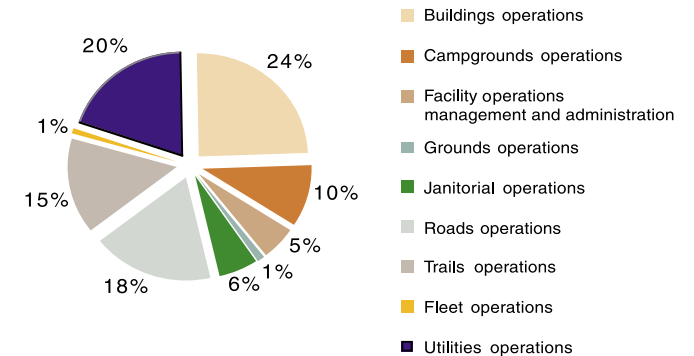
Whether climbing a High Sierra peak or ascending the Generals Highway, park visitors – knowingly or not – rely on the skilled services of the maintenance and operations crew. Facility Operations encompasses a variety of programs including buildings, grounds, janitorial, campgrounds, roads, utilities, fleet, and trails. These daily functions, ranging from sewage disposal and bathroom cleaning to bridge repair, building preservation and trail maintenance, allow the parks to operate smoothly.

Despite the vital role of Facility Operations, which required expenditures totaling \$5.6 million in FY2002, funding for its work continually falls short of program needs. This underinvestment resulted in an operational deficit of \$3.0 million and 38.0 FTE. Unmet needs in Facility Operations often translate into deteriorating infrastructure. For example, the historic Generals Highway, valued at \$176 million, receives only a fraction of the 10% annual rehabilitation required for superstructure maintenance. As such, portions of the Highway wear out twice as fast as they should.

Utilities Operations

The Utilities Operations program processes 45 million gallons of water and 18 million gallons of sewage for parks visitors and staff. Utility systems throughout the parks include 23 drinking water systems, six non-potable water systems, 23 water distribution systems, 29 water collection systems, 30 septic vault systems, 48 septic tank and drain field systems, five wastewater collection systems, and five wastewater treatment plants. Wastewater treatment and drinking water personnel perform all process control testing to ensure optimal plant operation. Utilities Operations suffers from ongoing personnel shortages and systemic weaknesses. The frail system puts the parks at risk for possible sewage spills and potential lack of compliance

Facility Operations FY2002 Expenditures by Program



| Total Required | | Available | | Shortfall | |
|----------------|-------------|-----------|-------------|-----------|---------------|
| FTE | Funds | FTE | Funds | FTE | Funds |
| 126.6 | \$8,552,582 | 88.6 | \$5,593,798 | (38.0) | (\$2,958,784) |

with government-legislated discharge permits. These problems have led to compromised standards and a high rate of staff turnover. Overcoming the FY2002 shortfalls of \$1.1 million and 11.6 FTE would spread the work across a more adequate number of employees and also provide better equipment.

Roads Operations

Keeping the parks' 167 miles of primary and secondary roads and 19 bridges passable for more than 650,000 vehicles – including oversized campers – consumes 22.4 FTE and \$1.4 million. Staff maintains erosion control structures, performs snow removal, operates traffic control structures, installs and removes snow guides, clears rock falls, stripes roads, and patches asphalt. Workers make every effort to maintain the Generals Highway on a year-round basis. However, due to a lack of adequate resources portions of the Highway between the parks may temporarily close during heavy snowfalls.

The parks' demanding road system strains program resources. A rockfall that damages a small section of road may divert 50% of the staff team for several days. As a result, critical daily tasks are completed during overtime hours or are not completed at all. Although it would cost \$4 million per mile to replace the highway, the parks have approximately \$7,100 per mile a year to maintain the road system. In comparison, Denali has \$34,300, Rocky Mountain has \$11,300 and Mount Rainer has \$9,100 to maintain each mile of their high-altitude road systems. To correct this situation, the program needed an additional \$393,000 and 7.7 FTE in FY2002.



Storm damage.

Grounds and Janitorial Operations

The Janitorial Operations program oversees cleaning and garbage collection for four visitor centers, dozens of public-use areas and several administrative buildings. Grounds crew oversees landscaping around these buildings and the parks' 165 residences. Together, the programs promote beautification, sanitation and safety within the front country.

The programs deploy their staff efficiently by moving employees from one high-demand place to another throughout the seasons. The parks also outsource over 50% of garbage removal so that costs vary according to visitor levels. The combined shortfall for these two programs comprises 6.5% of the total Facility Operations deficit. However, the programs lack 33% of the funds they need to meet their operational standards. This shortfall translated into a FY2002 shortfall of \$192,000 and 2.3 FTE, which was needed to fund additional seasonal staff and equipment.

Campground Operations

The Campground program oversees Sequoia and Kings Canyon's 14 campgrounds, three campfire circles, four amphitheatres, and eight picnic areas. Campground personnel tend sites, bathrooms, picnic tables, and bear lockers. Three campgrounds remain open year-round, giving visitors access to backcountry skiing and snowshoeing in addition to hiking, swimming and picnicking during the warmer months. The program needed an additional \$116,000 and 1.1 FTE in FY2002 to meet its sanitation and cleaning standards.

Generals Highway

The parks' main road was named the Generals Highway because it connects two of the largest trees in the world – the General Sherman tree and the General Grant tree. Completed in 1935, the 44-mile road provides a central artery for the parks' 1.5 million annual visitors. It contains 23 switchbacks and 200 twisting curves, reaching its 7,800 foot apex near the Big Baldy trailhead in Sequoia National Forest.

Generals Highway's history dates back to the beginning of the 20th century when park staff recognized the limits of their wagon roads to serve automobiles. In 1926 the first 16 miles of the highway opened, linking the foothills region to Giant Forest. Nine years later, the Civilian Conservation Corps extended the road by nearly 30 miles, adding rock guard-walls, drains, and bridges. Today, parks staff and engineers from the Federal Highway Administration are working together to modernize and renovate the roadway system – one which can both serve the parks' visitors and protect surrounding land from erosion.

Maintenance



On-site vehicle maintenance ensures prompt service for the parks' vehicles.



Giant Forest signs direct visitors to wheelchair accessible park facilities.

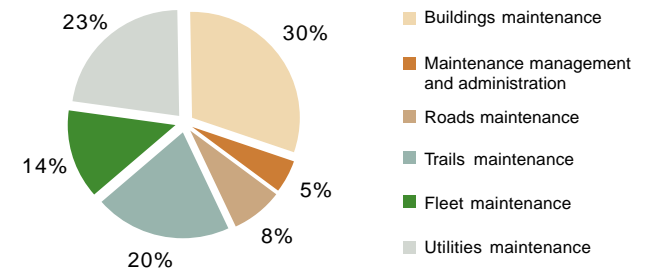
Sequoia and Kings Canyon National Parks' infrastructure of trails, roads, water systems, and buildings requires significant recurring maintenance. Implementing a sustainable maintenance plan that rectifies a backlog of aging infrastructure is one of the top three overall priorities in the parks. The Maintenance program includes buildings, utilities, roads, trails, management and administration, and transportation. Activities include long-term rehabilitation and repair work, preventive maintenance, and equipment and infrastructure replacement.

The majority of the employees involved in this area also serve the Facility Operations programs, leading to compromises between daily operations and cyclical maintenance. Maintenance activities comprised 11.2% of total parks expenditures in FY2002, employing 26.9 FTE at a cost of \$2.5 million. An additional \$4.1 million was needed to help the parks reduce the 40-year maintenance backlog.

Buildings Maintenance

The Buildings Maintenance program oversees major repairs, rehabilitation and reconstruction of Sequoia and Kings Canyon's 494 buildings, which include headquarters, visitor centers, staff housing, comfort stations and other support facilities. They also oversee 111 structures that have historic significance; most are listed in fair or poor condition. Maintenance consumes approximately 25% of the parks' building budget, while Operations consumes the remaining 75%. In an efficient buildings program, these proportions are reversed. By strategically investing in long-term maintenance, the parks can minimize operational costs and lower the overall buildings budget. For example, in the mid 1990s, staff replaced 16 deteriorating house

Maintenance FY2002 Expenditures by Program



| Total Required | | Available | | Shortfall | |
|----------------|-------------|-----------|-------------|-----------|---------------|
| FTE | Funds | FTE | Funds | FTE | Funds |
| 38.8 | \$6,626,728 | 26.9 | \$2,487,480 | (11.9) | (\$4,139,247) |

trailers with new housing units, which markedly reduced operational costs. In FY2002, the programs required increased funding of \$1.8 million (mainly for contracted services) and 0.5 FTE.

Trails Maintenance

With 865 miles of backcountry trails, Sequoia and Kings Canyon rank among the top five national parks for trail mileage. Ten permanent employees and eighteen seasonal crew members operate and maintain the parks' trail system continuously from June through August. In conjunction with dozens of volunteers and interns, the Trails program crew inspects and clears all trails at the beginning of the summer. Later in the season, they perform more extensive work on approximately 20% of the trail system – repairing drainage structures, revegetating over-used areas, and removing fallen trees.

Of greatest importance, the Trails Maintenance program ensures that erosion control systems stay free of water build-up. Staff also maintains 93 backcountry bridges and ensures that structures comply with Section 106 of the National Environmental Protection Act (NEPA) and the Americans with Disabilities Act (ADA). Due to the enormity of the trail system, including sections of the popular John Muir and Pacific Crest trails, the parks' trail crew experiences ongoing deficits.

Key objectives are to provide in-depth attention to 90% of the trails, and to complete two revegetation projects per year. They often have additional projects to complete such as overhauling bridges, relocating trails and installing new water bars. Trails Maintenance requires \$219,000 and an additional 4.2 FTE, particularly during the summer and shoulder seasons. In addition, day-to-day operational needs associated with the Trails Operations program required an additional \$200,000 and 6.8 FTE in FY2002.



Workers repaired Bubbs Creek bridge in 2002.

Fleet Maintenance

The Fleet Maintenance program maintains and repairs 152 General Services Administration (GSA)-leased and 135 park-owned vehicles. Fleet Maintenance installs equipment in new automobiles, provides welding services, and tests commercial vehicle operators. Stock operations crew train and care for 83 horses and mules. Additionally, the corral repairs and purchases tack and gear. In FY2002, this program required an additional \$133,000 and 1.7 FTE.

Maintenance Management and Administration

The Maintenance Management and Administration program oversees day-to-day fiscal duties of the Facilities Management division's \$8.1 million budget (not including annual investment expenditures) and 105.5 FTE. Activities include general supervision, regulation oversight, monitoring, public relations, and short- and long-term planning. To adequately manage parks facilities, the program needed an additional 1.3 FTE and \$131,000 in FY2002. Establishing new engineer and architect positions would fortify the program with expertise in building contracts, road design and underground storage tank regulations. The parks lack appropriate professionals necessary for Sequoia and Kings Canyon to meet industry benchmarks.

The Great Sierra Trails

Sequoia and Kings Canyon contain portions of three renowned long-distance hiking routes – the John Muir Trail (JMT), the Pacific Crest Trail (PCT) and the High Sierra Trail. The 211-mile JMT extends from Yosemite Valley to Mount Whitney, and 90 miles lie within these parks. The trail ascends several 12,000+ foot passes, showcasing some of the parks' most inspiring vistas.

The 2,650-mile PCT spans the western United States from Mexico to Canada. Over 100 miles fall within Sequoia and Kings Canyon. The PCT crosses three states (California, Oregon and Washington), nearly 60 major mountain corridors, descends into 19 major canyons and meanders by more than 1,000 lakes and tarns.

The 71-mile High Sierra Trail, initiated in 1928, runs from Crescent Meadow to Mount Whitney. Wholly contained within Sequoia National Park, the High Sierra Trail is considered the premier east-west trail through the Southern Sierra as much as the JMT is considered the premier north-south route.

Management and Administration

Managers support a workforce of over 600 employees spread throughout a massive geographic region.



The parks' financial management staff works hard to ensure that critical deadlines are met.

The superintendent, five division chiefs and a program manager comprise the senior leadership at Sequoia and Kings Canyon National Parks. This team sets policy, establishes goals and objectives, and provides long-term strategic planning. Historically, funding for Management and Administration has primarily supported internal operations, with little emphasis on external affairs. The superintendent plans to change this situation by creating a deputy superintendent position that will oversee public relations and outreach activities. The program's FY2002 shortfall of \$769,000 and 7.7 FTE represented a need for more dispatchers, parks-wide planners, and staff to develop strategic alliances.

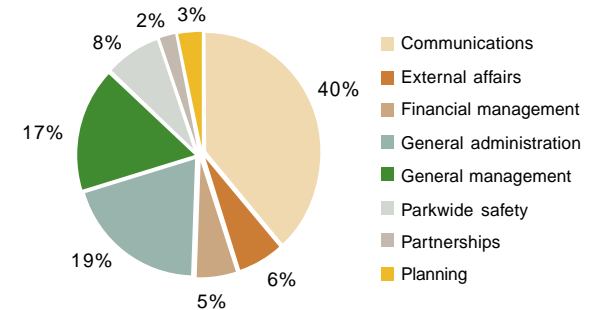
General Management

In addition to its leadership duties, the General Management program oversees human resource functions including recruitment and placement, labor-management relations, and oversight of the employee assistance program. Managers support an annual workforce of over 600 full-time and part-time employees who are categorized as permanent, temporary, seasonal, or subject-to-furlough. The hours worked by these employees total 347.4 FTE – the fifth highest FTE count in the National Park Service. Subject-to-furlough status allows the parks to reduce variable costs during their slow seasons. The parks have also leveraged their dollars by implementing new recruitment practices. There was a slight shortfall of \$132,000 and 0.2 FTE in this program in FY2002.

General Administration and Financial Management

The General Administration and Financial Management program oversees procurement, contracting, property services, budgeting, auditing, and funding requests. The program also maintains the parks' warehouse, which contains over 2,700 items

Management & Administration FY2002 Expenditures by Program



| Total Required | | Available | | Shortfall | |
|----------------|-------------|-----------|-------------|-----------|-------------|
| FTE | Funds | FTE | Funds | FTE | Funds |
| 49.5 | \$4,021,994 | 41.8 | \$3,253,188 | (7.7) | (\$768,806) |

ranging from provisions for backcountry staff to replacement parts for plumbing and building needs. Total inventory is valued at approximately \$500,000. The programs showed a shortfall of \$89,000, largely due to vacant positions in FY2002. Funds set aside for these unfilled positions were redirected to other park operations during the interim period.

Communications

Many of the parks' duty stations are located in remote areas, requiring a sophisticated communication system. Voice, radio, and computer services for the parks are managed by three separate divisions. The Law Enforcement division maintains a 24-hour dispatch center for fire departments, ambulances, law enforcement rangers, other parks employees, and visitors. The Information Management team maintains the computer infrastructure and provides help-desk support. The Telecommunications team provides telephone systems for

over 300 users, and designs, installs, and maintains a radio infrastructure of seven radio networks and almost 600 radios. Communications services cost the parks \$1.3 million in FY2002 with a shortfall of \$243,000 and 2.9 FTE. This shortfall represented costs associated with maintaining a digital radio network, computer infrastructure improvements, and additional security needs. This shortfall was somewhat deceptive; the actual shortfall for personnel was much larger because several dispatch employees worked significant amounts of overtime.

Parkwide Safety

The parks dedicate two full-time staff exclusively to the safety program. In addition, six employees are assigned collateral duties as safety advisors. Each senior park manager also participates in the program to prevent accidents and to respond to incidents promptly. The parks are committed to promoting safety among both visitors and staff through extensive training, prevention activities, and accident investigation. In FY2002, funding and FTE levels covered all but a slight \$10,000 gap.

Planning

Sequoia and Kings Canyon do not have a centralized planning department. However, parks-wide administration and management staff works with division chiefs and branch leaders to develop planning documents. The parks are revising their General Management Plan, which will provide a framework for planning at the division and geographic district levels over the next 10 to 15 years. The planning function addresses critical issues related to natural resource management, fire management, design and construction of new park facilities, rehabilitation of existing historic structures, and major maintenance and investment

projects. A deficit of 1.1 FTE and \$96,000 in FY2002 represented the need for a planning coordinator to support the senior management team.

Partnerships and External Affairs

Sequoia and Kings Canyon engage in several partnerships that provide mutual benefit to the parks and organizations in neighboring communities. The Sequoia Natural History Association (SNHA) generates over \$1.4 million gross annual revenue through six sales outlets, and provides nearly \$400,000 in donated aid to the parks annually. Through its Sequoia Field Institute subsidiary, SNHA provides tours through Crystal Cave to 50,000 visitors each summer, operates the Beetle Rock Education Center, and conducts field seminars. Staff also works with the Sequoia Fund, a nonprofit organization raising over \$100,000 annually through a variety of events and campaigns.

The External Affairs program informs visitors and community members about park events and incidents. Activities include writing articles and press releases, replying to visitor comments, communicating with governments, and participating in community meetings. In addition, a fire information officer updates surrounding communities on prescribed burns and other fire events.

Parks management recognizes a need to cultivate new partnerships and to establish stronger marketing. For instance, Sequoia and Kings Canyon do not have as many major donors from in California's urban centers as neighboring parks units do. The parks also seek additional ties with the Central Valley's different ethnic communities, who currently represent a relatively small portion of parks visitation. To fully accomplish these partnerships and external affairs goals, the parks required an additional 2.4 FTE and \$199,000 in FY2002.



Shared Communication System Saves Money & Improves Quality

Whether serving visitors from a remote backcountry spot or patrolling the crowds by car, park employees rely on radio communication to perform their jobs. Sequoia and Kings Canyon's telecommunications shop supports these efforts by operating and maintaining seven radio networks and 571 portable radios for over 600 employees.

Recognizing the efficiencies that come from collaboration, the parks' telecommunication shop coordinates wireless radio communication, telephone service, and high-speed data connections for all National Park Service units within the Pacific West Region (a total of 4,051 portable and mobile radios, 216 base stations, and 109 repeaters). This arrangement not only affords cost-savings for the parks, but it also provides a more sophisticated system than any one park could purchase on its own.

Financials

Summary Financial Statement

In FY2002, Sequoia and Kings Canyon required \$36.2 million to fund operations sufficiently, but only received \$22 million.



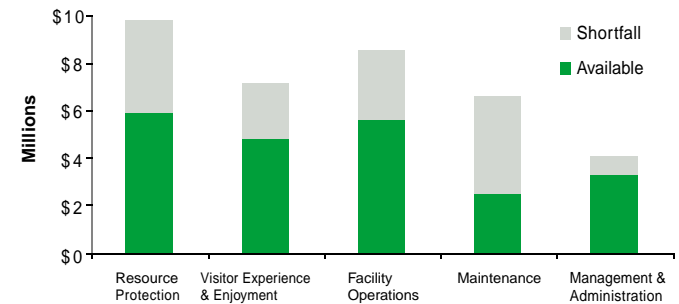
The Summary Financial Statement on the facing page details the resource needs of the parks' five functional areas and 37 programs. It lists the actual funding available for each program in FY2002 as well as the funding required to meet the parks' needs for long-term sustainability. The total funding deficit for each program is listed in terms of FTE and dollars on the far right side of the table. Totals for the parks as a whole are aggregated on the bottom line.

In FY2002, Sequoia and Kings Canyon required \$36.2 million and 497.9 FTE to meet their operational standards. However, the parks had only \$22.0 million and 347.4 FTE available, leaving them underfunded by \$14.2 million and 150.5 FTE.

The greatest shortfalls occurred in Facility Operations (\$3.0 million, 38.0 FTE), Maintenance (\$4.1 million, 11.9 FTE), and Resource Protection (\$3.9 million, 65.2 FTE). In Maintenance, the shortfall actually exceeded the amount of available resources and represented 62.5% of required funding. Resource Protection's shortfall represented 39.6% of required funding. The shortfall in Visitor Experience and Enjoyment was 33.4% and the shortfall in Facility Operations was 34.6%. Management and Administration had the smallest gap in both absolute and relative terms, with a shortfall of \$769,000 representing only 19.1% of required funding.

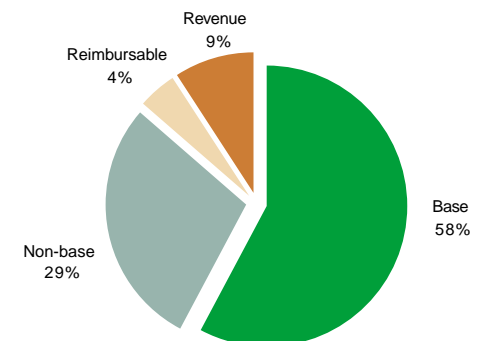
The pie chart indicates that 58% of the parks' operations and maintenance funds in FY2002 came from the Appropriated Base budget. Appropriated Non-base money made up 29% of expenditures for parks operations. Facility Operations and Maintenance consistently use a larger percentage of non-base funds than other departments due to the nature of their project-driven work. Revenue funds comprised 9% of the budget in FY2002, while Reimbursable funds accounted for the remaining 4%.

FY2002 Required and Available by Functional Area



Please note that the Summary Financial Statement and the charts on this page do not reflect the \$2.7 million in investments the park made in FY2002. Appropriated Non-base and Revenue funds contribute a larger fraction of the funds for investment projects than they do for park operations in general. Thus, Appropriated Base funds represent a lower percentage of the total park budget than the 58% reported in the pie chart.

FY2002 Expenditures by Fund Source



| FUNCTIONAL AREAS AND PROGRAMS | REQUIRED | | AVAILABLE | | | | TOTAL | | SURPLUS/(DEFICIT) | |
|---|----------|--------------|--------------|-------------|------------------|-------------|-------|--------------|-------------------|----------------|
| | FTE | Funds | APPROPRIATED | | NON-APPROPRIATED | | | | | |
| | | | Base | Non-base | Reimbursable | Revenue | FTE | Funds | FTE | Funds |
| RESOURCE PROTECTION | | | | | | | | | | |
| Cultural resource management | 7.0 | \$396,774 | \$138,095 | \$20,202 | \$1,895 | \$25 | 3.3 | \$160,217 | -3.7 | (\$236,557) |
| Information integration and analysis | 7.5 | \$661,942 | \$92,548 | \$119,483 | \$140,691 | \$0 | 3.3 | \$352,723 | -4.2 | (\$309,219) |
| All other natural resource management | 57.1 | \$3,728,564 | \$999,903 | \$622,057 | \$77,257 | \$135,135 | 26.9 | \$1,834,352 | -30.2 | (\$1,894,212) |
| Fire | 70.3 | \$3,743,817 | \$291,917 | \$2,324,807 | \$11,372 | \$3,155 | 46.8 | \$2,631,250 | -23.5 | (\$1,112,567) |
| Resource protection management and administration | 15.8 | \$1,269,239 | \$737,984 | \$167,492 | \$1,570 | \$37,870 | 12.4 | \$944,916 | -3.5 | (\$324,322) |
| Subtotal | 157.7 | \$9,800,335 | \$2,260,447 | \$3,254,042 | \$232,785 | \$176,185 | 92.5 | \$5,923,459 | -65.2 | (\$3,876,877) |
| MAINTENANCE | | | | | | | | | | |
| Buildings maintenance | 5.6 | \$2,581,355 | \$161,651 | \$516,956 | \$4,608 | \$75,827 | 5.1 | \$759,043 | -0.5 | (\$1,822,312) |
| Maintenance management and administration | 2.8 | \$250,940 | \$111,938 | \$8,252 | \$0 | \$48 | 1.4 | \$120,239 | -1.3 | (\$130,701) |
| Roads maintenance | 4.1 | \$1,213,340 | \$79,227 | \$31,360 | \$971 | \$77,701 | 2.0 | \$189,260 | -2.1 | (\$1,024,080) |
| Trails maintenance | 15.3 | \$725,425 | \$97,276 | \$272,036 | \$0 | \$137,288 | 11.1 | \$506,601 | -4.2 | (\$218,824) |
| Transportation systems and fleet maintenance | 7.2 | \$481,723 | \$276,722 | \$200 | \$71,675 | \$0 | 5.5 | \$348,597 | -1.7 | (\$133,125) |
| Utilities maintenance | 3.9 | \$1,373,946 | \$38,579 | \$471,047 | \$50,217 | \$3,898 | 1.8 | \$563,741 | -2.1 | (\$810,205) |
| Subtotal | 38.8 | \$6,626,728 | \$765,394 | \$1,299,853 | \$127,471 | \$294,763 | 26.9 | \$2,487,480 | -11.9 | (\$4,139,247) |
| VISITOR EXPERIENCE and ENJOYMENT | | | | | | | | | | |
| Concessions management | 3.2 | \$228,253 | \$157,096 | \$716 | \$38,806 | \$499 | 3.1 | \$197,116 | 0.0 | (\$31,137) |
| Education | 5.9 | \$326,261 | \$123,634 | \$577 | \$439 | \$13,461 | 2.3 | \$138,111 | -3.5 | (\$188,150) |
| Fee collection | 21.8 | \$832,519 | \$36,994 | \$4,929 | \$83,381 | \$585,317 | 21.5 | \$710,620 | -0.3 | (\$121,899) |
| Interpretation | 17.5 | \$964,769 | \$599,726 | \$26,875 | \$6,957 | \$53,291 | 14.2 | \$686,849 | -3.3 | (\$277,920) |
| VEE management and administration | 11.2 | \$837,683 | \$634,579 | \$14,815 | \$9,561 | \$26,790 | 9.6 | \$685,745 | -1.6 | (\$151,939) |
| Visitor center operations | 7.6 | \$435,489 | \$282,695 | \$2,558 | \$6,516 | \$20,802 | 7.3 | \$312,570 | -0.3 | (\$122,918) |
| All Other Visitor safety services | 43.6 | \$2,723,914 | \$1,140,726 | \$499,336 | \$2,649 | \$40,419 | 31.8 | \$1,683,131 | -11.8 | (\$1,040,783) |
| Anti-marijuana operations | 7.2 | \$522,612 | \$71,571 | \$62,042 | \$0 | \$2,495 | 1.6 | \$136,108 | -5.6 | (\$386,505) |
| Visitor use services | 7.4 | \$287,728 | \$175,387 | \$16,990 | \$671 | \$23,414 | 6.0 | \$216,462 | -1.4 | (\$71,266) |
| Subtotal | 125.2 | \$7,159,229 | \$3,222,409 | \$628,838 | \$148,979 | \$766,487 | 97.5 | \$4,766,713 | -27.7 | (\$2,392,516) |
| FACILITY OPERATIONS | | | | | | | | | | |
| Buildings operations | 22.5 | \$2,070,538 | \$899,609 | \$26,072 | \$30,776 | \$406,926 | 17.9 | \$1,363,382 | -4.6 | (\$707,155) |
| Campgrounds operations | 12.8 | \$658,514 | \$375,692 | \$4,096 | \$3,859 | \$159,264 | 11.7 | \$542,912 | -1.1 | (\$115,602) |
| Facility operations management and administration | 6.1 | \$436,776 | \$301,460 | \$0 | \$446 | \$0 | 4.4 | \$301,906 | -1.7 | (\$134,870) |
| Grounds operations | 2.4 | \$87,187 | \$33,967 | \$14,144 | \$110 | \$14,955 | 1.8 | \$63,176 | -0.6 | (\$24,012) |
| Janitorial operations | 8.2 | \$488,521 | \$302,991 | \$565 | \$7,957 | \$8,637 | 6.5 | \$320,150 | -1.7 | (\$168,371) |
| Roads operations | 22.4 | \$1,390,999 | \$759,307 | \$196,650 | \$23,140 | \$19,340 | 14.7 | \$998,436 | -7.7 | (\$392,563) |
| Trails operations | 22.6 | \$1,056,947 | \$451,148 | \$285,321 | \$59,388 | \$60,983 | 15.8 | \$856,839 | -6.8 | (\$200,108) |
| Transportation systems and fleet operations | 3.8 | \$162,870 | \$42,639 | \$22 | \$0 | \$0 | 1.5 | \$42,661 | -2.3 | (\$120,209) |
| Utilities operations | 25.9 | \$2,200,231 | \$825,804 | \$40,978 | \$126,994 | \$110,560 | 14.3 | \$1,104,336 | -11.6 | (\$1,095,894) |
| Subtotal | 126.6 | \$8,552,582 | \$3,992,618 | \$567,848 | \$252,669 | \$780,664 | 88.6 | \$5,593,798 | -38.0 | (\$2,958,784) |
| MANAGEMENT and ADMINISTRATION | | | | | | | | | | |
| Communications | 19.3 | \$1,502,744 | \$932,239 | \$284,415 | \$43,049 | \$0 | 16.4 | \$1,259,703 | -2.9 | (\$243,041) |
| External affairs | 4.0 | \$330,493 | \$166,156 | \$36,683 | \$1,855 | \$102 | 2.7 | \$204,796 | -1.2 | (\$125,697) |
| Financial management | 4.3 | \$236,169 | \$168,966 | \$8,446 | \$0 | \$0 | 3.4 | \$177,412 | -0.9 | (\$58,756) |
| General administration | 6.9 | \$663,582 | \$314,432 | \$154,787 | \$164,449 | \$144 | 6.7 | \$633,812 | -0.2 | (\$29,770) |
| General management | 8.8 | \$693,709 | \$561,171 | \$602 | \$162 | \$0 | 8.6 | \$561,934 | -0.2 | (\$131,774) |
| Parkwide safety | 2.3 | \$261,364 | \$201,814 | \$42,166 | \$5,572 | \$2,082 | 2.3 | \$251,634 | 0.0 | (\$9,729) |
| Partnerships | 2.0 | \$147,102 | \$53,980 | \$13,961 | \$5,527 | \$0 | 0.7 | \$73,468 | -1.2 | (\$73,634) |
| Planning | 2.1 | \$186,831 | \$88,171 | \$1,213 | \$1,044 | \$0 | 1.0 | \$90,428 | -1.1 | (\$96,403) |
| Subtotal | 49.5 | \$4,021,994 | \$2,486,928 | \$542,274 | \$221,658 | \$2,328 | 41.8 | \$3,253,188 | -7.7 | (\$768,806) |
| GRAND TOTAL | 497.9 | \$36,160,868 | \$12,727,795 | \$6,292,853 | \$983,563 | \$2,020,427 | 347.4 | \$22,024,638 | -150.5 | (\$14,136,230) |

This financial statement has been prepared from the books and records of the National Park Service in accordance with NPS accounting policies. The resources available reflect the total operations and maintenance expenses incurred by the parks during the last complete fiscal year. The resources required represent the funding needed to operate the parks while fully meeting operational standards as defined in business plan supporting documentation. Program requirements are presented as a five-year planning tool based on salary and wage tables from the same fiscal year, given current resource inventories, and the current parks infrastructure. Changes resulting from one-time projects and capital improvements (e.g. investments) may have a resulting impact on the operational requirements presented.

The value of donated materials and in-kind services is not included as an available resource in the financial summary because these materials and services are not only used for required operations. See page 28 for information on the valuation of work performed by volunteers.

The financial statement presents the available and required resources for the operational activities of the parks only. Investment expenditures for capital improvements or other one-time projects are not accounted for in this statement. For information on the parks' funded investments, see page 30.

Volunteer Analysis



Volunteers work under the supervision of National Park Service staff.

“Sequoia National Park has played an essential part in my life both educationally and personally. It has allowed me to recognize the importance of conserving the earth... I [now] have a better idea of how I will try and help the world.”

Lolita Muñoz, VIP
16 years old,
South Central Los Angeles

Through the Volunteers-in-Parks (VIP) program, 736 individuals logged 40,777 hours of labor in Sequoia and Kings Canyon National Parks in FY2002. Parks volunteers include residents of surrounding communities, retired people, scout groups, civic organizations, students from the Student Conservation Association (SCA), the California Conservation Corps (CCC), the Youth Conservation Corps (YCC), Sequoia for Youth, and California educational institutions. Volunteers range in age from 12 to over 80 years old; most live in California, Nevada or Arizona. Their efforts in FY2002 represent the equivalent of 19.6 FTE, with a net benefit of \$610,696, according to a National Park Service estimate of \$15.31 per hour. This benefit represents 2.7% of the parks' FY2002 operating budget. The cost-per-volunteer is less than \$20 per year, exclusive of supervision and training costs. Since FY2000, Sequoia and Kings Canyon have increased volunteer hours by 15.3%.

Volunteers share their talents and enthusiasm for the parks by assisting with trail work, education and visitor services, archeology, science, photography, business, and administration. The largest contributions go toward

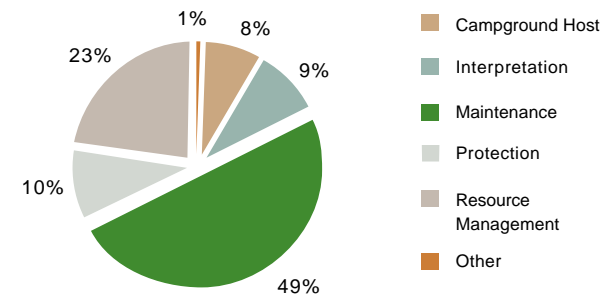


A volunteer teaches a young visitor about Sierra geology.

Maintenance, which includes working on roads, trails and litter pick up. Resource Protection also engages significant numbers of volunteers in bear management, plant ecology and wilderness permitting. All seasonal campground hosts provide their services on a volunteer basis.

The parks recruit volunteers through national volunteer websites, word-of-mouth, long-standing partnerships and publicity concerning specific volunteer positions. The parks see volunteerism as an area with tremendous potential for future growth. With a volunteer coordinator dedicated to outreach, training and supervision, the parks could recruit approximately twice as many volunteers, thereby generating additional services worth \$600,000. Furthermore, the volunteer coordinator could collaborate with organized volunteer groups and shift volunteer participation patterns to promote more efficient use of the parks' resources. In particular, the parks need more housing for long-term volunteers and interagency partnerships. Through these efforts, the parks would also achieve their goal of developing deeper connections with partner organizations.

FY2002 Volunteer Hours by Category



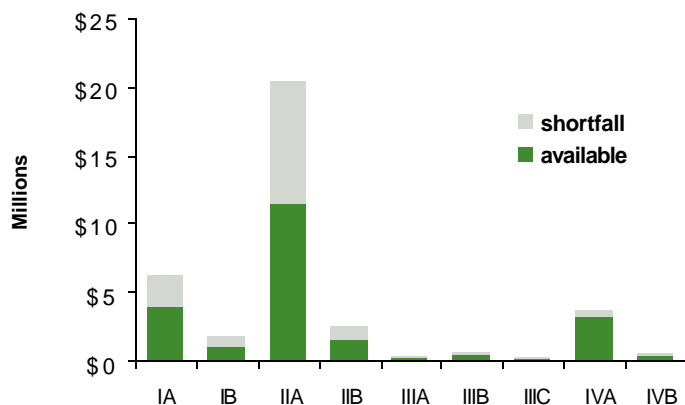
Government Performance and Results Act

The Government Performance and Results Act (GPRA), passed by Congress in 1993, was designed to improve federal management practices and to provide greater accountability for achieving results. The Act requires agencies to become less process-oriented and more results-driven. The four goals listed on the sidebar comprise National Park Service's primary focus areas. Managers allocated the expenditures of the parks' 37 programs across these goals.

Goal I: Preserve Parks Resources

Many of the programs within the Visitor Experience and Enjoyment and Resource Protection functional areas allocate a large percentage toward this goal. Specifically, the Fire, Cultural Resource Protection and Anti-marijuana programs achieve this goal through fire management, research and prescribed burning, preservation of historic buildings and artifacts, and marijuana eradication efforts. This goal accounts for 22% of available resources and represents 19% of the total GPRA shortfall for the parks. The shortfall in the Fire program accounts for the majority of this deficit.

FY2002 Expenditures by GPRA Goal



Goal II: Provide for the Public Enjoyment and Visitor Experience of Parks

The primary programs devoted to public enjoyment and positive visitor experiences include Visitor Safety Services, Interpretation, Education and all of the Maintenance and Facility Operations programs. The parks expend 53% of their funding toward this goal, yet need an additional \$9.7 million in funding, representing 68% of the total GPRA shortfall for the parks. Maintenance and Facility Operations account for the largest deficits and therefore affect this GPRA goal most significantly.

Goal III: Strengthen and Preserve Cultural Resources and Enhance Recreational Opportunities Managed by Partners

Toward this goal, the parks deploy personnel from their External Affairs, Partnerships, and Resource Protection programs. The parks dedicate 7% of their total funds toward Goal III, and this goal represents 7% of the total shortfall. Although these percentages appear slight, an increase in partnerships could have a significant and positive impact on the parks.

Goal IV: Ensure Organizational Effectiveness

Limited resources oblige the parks to ensure organizational effectiveness. The Management and Administration programs oversee implementation of this goal. Financial, administrative and general management programs concentrate their efforts on information technology systems, personnel deployment, and budget oversight. The parks dedicate 17% of current funds toward this goal. Goal IV has a shortfall of only 4%.

I. Preserve Park Resources

- Natural and Cultural resources and associated values are protected, restored, and maintained in good condition and managed within their broader ecosystem and cultural context.
- The National Park Service contributes to knowledge about natural and cultural resources and associated values; management decisions about resources and visitors are based on adequate scholarly and scientific information.

II. Provide for the Public Enjoyment and Visitor Experience of Parks

- Visitors safely enjoy and are satisfied with the availability, accessibility, diversity, and quality of park facilities, services, and appropriate recreational opportunities.
- Park visitors and the general public understand and appreciate the preservation of parks and their resources for this and future generations.

III. Strengthen and Preserve Natural and Cultural Resources and Enhance Recreational Opportunities Managed by Partners

- Natural and cultural resources are conserved through formal partnership programs.
- Through partnerships with other federal, state, and local agencies and nonprofit organizations, a nationwide system of parks, open space, rivers and trails provides educational, recreational, and conservation benefits for the American people.
- Assisted through federal funds and programs, the protection of recreational opportunities is achieved through formal mechanisms to ensure continued access for public recreational use.

IV. Ensure Organizational Effectiveness

- The National Park Service uses current management practices, systems, and technologies to accomplish its mission.
- The National Park Service increases its managerial resources through initiatives and support from other agencies, organizations, and individuals.

Funded Investments



Trail crews rehabilitated several miles of trails.

Investments are one-time expenditures that improve the infrastructure or increase the intellectual capital of the parks. In FY2002, Sequoia and Kings Canyon National Parks spent \$2.7 million on various investments, including final stages of the Giant Forest restoration (please see page 40) and the following major projects:

Trails and Bridges

Investment: \$729,000

In mid-2002, trail crews rerouted and rehabilitated parts of the trail network in Giant Forest and widened and redefined parts of the Tokopah, Alta, Bear Hill, and Paradise trails. In Mineral King, crews rebuilt one mile of the widely used Tar Gap and White Chief trails, and rehabilitated eight miles of trails in the nearby Hockett area. Workers also built five bridges and overhauled four others across some of the most hazardous waterways in the parks, including the Kern and Kaweah rivers and Granite and Bubbs creeks.



The new, wheelchair-accessible comfort station at the Big Stump picnic area.

Big Stump and Columbine Picnic Areas

Investment: \$671,000

Big Stump and Columbine are two of the most heavily used picnic areas in Kings Canyon. In FY2002, workers removed existing restrooms and replaced them with facilities that provide better accessibility and accommodate more visitors. Maintenance crews created a trail to key overlooks in Big Stump and installed accessible picnic tables, grills, shade structures and landscaping in both areas. The parking area at Big Stump was also reconfigured and new paving, curbing, striping and drainage were installed.

Asbestos Abatement

Investment: \$450,000

Ninety-five percent of the parks' facilities were built prior to asbestos regulations. In 2002, park staff removed asbestos from approximately 30 buildings, reducing hazards to visitor and staff health, and the potential for soil, water, and air contamination.

Marijuana Detection and Eradication

Investment: \$156,000

In FY2002, law enforcement staff spent \$111,000 above and beyond normal operations to support marijuana garden eradication projects. Additionally, they spent or had donated another \$45,000 in services. This includes donated time from the sheriff's department, costs associated with outside helicopters, and other miscellaneous expenses. Approximately 35,000 marijuana plants totaling 15 tons were eradicated in 2002.



Workers removed asbestos from 30 buildings in 2002.

South Fork, Potwisha and Buckeye Campgrounds

Investment: \$131,000

In 2002, park staff neared completion of a project to rehabilitate these 60-year-old campgrounds. New bear-proof food storage lockers were installed to mitigate human-bear interactions and property damage. Previously, the poor condition of roads and trails in these areas impeded accessibility and led to erosion affecting ecologically sensitive areas.



The amphibian resurvey will help document the decline of the mountain yellow-legged frog.

Amphibian Resurvey

Investment: \$100,000

Resource Protection staff received funding in FY2002 to survey approximately 500 lakes, marshes, and ponds in the north end of Kings Canyon National Park. The surveys will study amphibians, non-native fish, chytrid fungus infections, and habitats at each site. The area was previously surveyed in 1997, and the resurvey will help document the rate of amphibian decline and determine changes in fish populations and distributions. This information is needed to develop a comprehensive program for the recovery and management of the threatened mountain yellow-legged frog and parks lakes in general.

Grant Grove Visitor Center Exhibits

Investment: \$80,000

Grant Grove is one of the busiest visitor centers in the parks, hosting over 30,000 visitors per month during the high season. Until this project, it housed dilapidated, 30-year-old exhibits that were obsolete in design and information. This \$600,000 multi-year project, begun in 2002, will replace outdated equipment, lighting and technology with updated exhibits.



The Grant Grove visitor center is developing new exhibits.



The wood shop supports the development of visitor center and wayside exhibits.

Priorities and Strategies

Operations and Maintenance Priorities



By researching and monitoring natural areas, staff can preserve biodiversity.

The preceding analysis of current park operations and financial shortfalls identified needs across all functional areas at Sequoia and Kings Canyon National Parks. This section describes specific needs and estimates the resources that would be required on an annual basis to meet them. Resource requirements are presented in terms of full-time equivalents (FTE) and dollar amounts needed to cover both labor and non-labor costs on an ongoing basis.

The following operations and maintenance priorities, which total \$5.4 million and 90.7 FTE, reinforce the three key issues highlighted at the beginning of this plan: preserving the parks' unique resources, reducing the maintenance backlog, and developing partnerships.

RESOURCE PROTECTION

Deter Marijuana Cultivation

\$498,000 and 8.0 FTE

Marijuana cultivation is a natural resources issue as much as it is a law enforcement issue. The problem was previously discussed in the context of Visitor Safety Services because protection rangers search the high-probability foothill regions to deter cultivation. Marijuana plants were eradicated in five park watersheds in 2002. Chemical-intensive marijuana cultivation on such a large scale damages aquatic and terrestrial resources and is potentially hazardous to visitors. Additional law enforcement rangers, dispatchers, and a crew of resource monitors are needed to suppress this activity and rehabilitate damaged resources.

Preserve Biodiversity Through Research & Monitoring

\$791,000 and 14.0 FTE

Sequoia and Kings Canyon are home to over 50 sensitive species, including mountain yellow-legged frogs and Sierra bighorn sheep. Ecosystem stressors are poorly understood, and the parks need better scientific information to identify problems and act effectively to

manage them. Funding would support natural resource inventories, long-term monitoring, restoration and recovery of species, scientific studies, and corrective action.

Expand Fire Program to Overcome Urgent Shortfalls **\$477,000 and 10.7 FTE**

The wildland fire program is in need of additional resources to carry out a full complement of fire and fuels management activities including fire suppression and prescribed burns. Funding would pay for additional staffing for two engine crews, full staffing for a third engine crew, additional helicopter personnel, increased staffing for the Arrowhead Hotshot crew, and a program budget assistant.

Protect Resources in New Lands at Dillonwood Grove and Other Wilderness Areas

\$696,000 and 9.0 FTE

The 1,540-acre Dillonwood grove, acquired by the parks in 2001, is one of the five largest groves of mature sequoia trees in existence. Due to its isolation, the area is at high risk for wildland fires and law enforcement problems. On-site management is critical to protect resources and educate neighbors. Funding would provide for minimal visitor services and facilities, connections to existing trails, contracted waste disposal services, law enforcement protection, and wilderness rangers in Dillonwood and several other remote regions of the park.

Mitigate Tree and Bear Hazards

\$445,000 and 7.0 FTE

The parks average over 200 human-bear incidents and thousands of dollars in bear-related property damage each year. Funding a bear program and reducing reliance on high-turnover volunteers would allow the parks to save training dollars, shift from reactive to proactive bear management, and provide safer work conditions. In addition to bears, tree hazards also threaten the safety of visitors who travel through the parks' forests each year. Existing staff levels are inadequate to mitigate the annual increment of hazardous fallen and hanging branches.



Young sequoia trees in the Dillonwood Grove, acquired by the parks in 2001.

MAINTENANCE

Manage Maintenance Backlog

\$295,000 and 2.0 FTE

The maintenance and construction backlog consists of over \$60 million in projects, including rehabilitation of trails, roads, campgrounds, and utility systems, completion of the Giant Forest restoration, and construction of new facilities. The parks do not have professional staff to prepare contract specifications or provide technical review and project supervision, and this assistance is no longer available from the Denver Service Center. Funding would be dedicated to providing design services, conducting plan reviews and supervising construction. Projects done right the first time save money in the long run.

Preserve Historic Structures and Establish Structural Fire Program

\$697,000 and 7.0 FTE

Current funding does not address the parks-wide structural fire issues that affect the safety of staff, residents, and visitors. This funding would provide for a fire specialist to coordinate a structural fire prevention, inspection and suppression program, and provide operating funds for the parks' five structural fire brigades. Additionally, the parks contain several historic structures in fair or poor condition that receive minimal maintenance. Funding would provide scheduled preservation maintenance of these properties.

Maintain Frontcountry and Backcountry Trails

\$948,000 and 23.0 FTE

The parks do not have adequate funding to maintain their 865 miles of trails at a level that prevents damage to resources from erosion, encroachment and water pollution. Current funding received through cyclic maintenance and fee demonstration does not cover routine clearing and grading necessary to maintain all trails. A recent condition assessment shows that 348 miles of trail are in fair to poor condition.

PARTNERSHIPS AND OUTREACH

Educate Parks Neighbors Through Outreach Program

\$344,000 and 6.0 FTE

Current demand for formal education programs far exceeds the parks' capacity to provide educational services. Funding would expand the parks' current education program for students in grades K-12, integrating parks themes with school curricula. The program would consist of field trips, in-class programs, field research opportunities, a student/teacher webpage and teacher workshops. The parks would expand outreach to surrounding communities, especially Hispanic groups.

Improve Web-based Services and Increase Volunteers

\$260,000 and 4.0 FTE

Prospective visitors are increasingly using Sequoia and Kings Canyon's web page to obtain information about the parks. A webmaster dedicated to creating new materials and organizing information would improve this service, and students, researchers, visitors, and partners would benefit. A growing number of Hispanic visitors are utilizing the Foothills area of the park, and expanded interpretive services are needed there to serve this constituency. Additionally, a full-time, parks-wide volunteer coordinator would increase recruitment and organize training services, activities that are largely neglected due to a lack of resources.



Numerous bear incidents occur each year, partly due to inadequate visitor education.



Additional partnerships will provide experiential education for thousands more children.

Investment Priorities



The parks' water system needs a major overhaul.

Investments are one-time expenditures of funds dedicated to projects that enhance the tangible and intangible assets of the parks, including roads, buildings, and scientific and cultural knowledge. Currently, Sequoia and Kings Canyon National Parks have developed over 200 project requests for National Park Service funding, with a total investment need of over \$137 million. The following projects comprise several of the parks' top investment priorities:

Parks-wide Radio System

Required Investment: \$1,865,000

The government has mandated that all federal radio users switch to new narrowband technology by 2005. The transition to this system will allow public safety communications to meet more stringent national privacy and security requirements. Sequoia and Kings Canyon will remove and replace its old wide-band land/mobile radio system with a system that complies with the regulation.

Generals Highway Rehabilitation

Required Investment: \$54,110,000

The Generals Highway is the primary artery through the parks and has been in continuous use since 1926. The winding, heavily used road is failing in many areas. Retaining walls, cut walls, culverts and support structures are slipping or collapsing, the surface is deteriorating and of uneven width, and parking areas and pullouts are unable to handle current traffic flows. Continued deterioration of the highway will result in damage to the adjacent natural environment, higher maintenance costs, and hazardous driving conditions and will ultimately threaten the ability of the visitors to see and enjoy the parks. The total represents nine separate projects for different parts of a 40-mile length of roadway, to be completed over the next decade.



Constructed in the 1920s, the Generals Highway requires significant investment.

Water Systems Rehabilitation

Required Investment: \$4,760,000

The water distribution systems in Lodgepole and Grant Grove are over 50 years old, fail on a regular basis, do not provide adequate fire safety, and do not comply with plumbing codes. This project consists of the replacement of approximately 33,100 linear feet of sewage and water pipeline. The replacement of water tanks at Ash Mountain headquarters is also included.

Replacement of Giant Forest Facilities at Wuksachi

Required Investment: \$6,341,000

The restoration of the Giant Forest involved the removal of overnight and day-use facilities and their replacement at nearby Wuksachi Village. The remaining part of the Wuksachi project requires resurfacing of roads and parking lots; completion of electrical work; design, manufacture, and installation of wayside exhibits and directional signs; construction of an amphitheater; replacement of 23 failing fire hydrants; and completion of retaining walls and other improvements.

Giant Forest Transportation System

Required Investment: \$10,871,000

A primary goal of the Giant Forest rehabilitation project is to reduce the number of automobiles within the grove while maintaining public access. Projects currently underway will reduce available parking in the area by 60%. Park staff is working with the community to design an environmentally-sensitive public transportation system that will shuttle visitors around the Giant Forest. This project will include the purchase of 17 buses and the development of several shuttle stops. This system is only needed during the peak summer season. A park that has a winter system could lease the buses in the off-season, realizing savings for Sequoia and Kings Canyon and the National Park Service as a whole.

Quail Flat Fire Center

Required Investment: \$2,200,000

Fire management staffs from the parks and the US Forest Service are analyzing current preparedness as well as future partnerships to achieve more cohesive fire management planning and operations. This collaboration has resulted in plans for an interagency fire station to be located at Quail Flat. The station would be large enough to house two engines as well as barracks and common areas. Funding for the project would be shared between the two agencies.

Wilderness Ranger Stations

Required Investment: \$495,000

Wilderness rangers protect resources through education and enforcement and provide emergency medical services to the wilderness user. Current 30-year-old stations at Rae Lakes, LeConte, McClure, and Bearpaw are deteriorating and pose safety hazards to both rangers and visitors. The replacement ranger stations would be log cabins designed to be animal-proof and low maintenance with secure and adequate storage.

Trailhead Exhibits

Required Investment: \$216,000

Several trailhead exhibits are 20 years old and present obsolete trail and wilderness management information. New exhibits would provide critical safety information, educate the user about the cultural and natural resources of the area, and teach minimum impact hiking and camping techniques. By reaching more people with these messages, the exhibits will improve efficiency of interpretation and wilderness management.

Glacial Inventory, Mapping, and Monitoring

Required Investment: \$98,000

Sequoia and Kings Canyon, along with Yosemite, are home to 273 of the 497 glaciers and glacierets in the Sierra Nevada. Southern Sierra glaciers are drivers of some park ecosystems and key indicators of climate change. Anticipating changes to snowmelt and runoff due to climate change will be critical to California's agricultural, industrial, and domestic water supply. This project will integrate existing glacier data and imagery into a database, select six index glaciers to monitor, and create a chronology of historic change in glacial cover.



The Wuksachi Lodge replaced Giant Forest accommodations.



The Giant Forest Transportation System will reduce congestion around the General Sherman Tree.



Fire management and collaboration with other agencies remain top priorities.

Strategies for Reducing Costs



Recruiting college and graduate student interns could reduce the cost of natural resources studies.



Search and rescue efforts involve significant costs.

The following list provides a set of strategies for achieving greater economic efficiencies throughout Sequoia and Kings Canyon National Parks. The ideas were developed through meetings and discussions with parks management and staff. Some of the strategies come from other parks that have succeeded in implementing them. We expect both the breadth and depth of this list to grow over coming years.

Expand Educational Partnerships

Many forward-thinking institutions benefit from internship programs. Sequoia and Kings Canyon can offer high-quality research and mentorship opportunities in natural resources, fire protection, education and interpretation. By partnering with higher education institutions, the parks can not only enrich the lives of many up-and-coming environmental professionals, but they can also supplement their professional staff with students earning credit toward their undergraduate or graduate degree. In order to develop a well-functioning program, the parks should identify exemplary programs in National Parks after whom they can model their plan. The program can grow from a pilot initiative during its early years to a full-fledged year-round program. Financial support for interns could come from sponsoring schools and grant funding.

Actively Manage Volunteerism

With the addition of a full-time parks-wide volunteer coordinator, the parks can potentially double the current number of volunteers and increase capacity for trail rehabilitation, visitor information services and other duties. The coordinator would manage outreach and marketing, assist with placement and supervision, and develop relationships with other parks and agencies to pool resources. Moreover, other parks in the region such as Yosemite and Death Valley could

work jointly with Sequoia and Kings Canyon to provide seasonal volunteer training programs. While housing volunteers remains a limiting factor, the parks could also collaborate with concessionaires and local businesses to expand this resource base.

Recover Costs for Search and Rescue (SAR)

Expenditures for SAR activities exceed \$100,000 annually. In FY2002, 37 major incidents (over \$500) occurred, with the average cost per incident amounting to between \$1,000 and \$5,000. Extensive or multi-day searches often cost as much as \$70,000. During this same year, 20 minor incidents (under \$500) occurred. While the parks receive reimbursement from NPS's Pacific West regional office for all major incidents, they do not receive any reimbursement for minor incidents. In addition, reimbursements do not pay for employees who work on SARs during their regularly scheduled shifts.

Furthermore, Emergency Medical Services (EMS) expenses are not recovered in all areas of the parks. In Grant Grove, the local hospital reimburses the parks for their emergency services whereas in Ash Mountain, no such arrangement exists, and the parks absorb these frontcountry EMS costs. The parks could save money by (1) receiving reimbursement for staff time, and (2) implementing the EMS reimbursement program in Grant Grove or other parts of the parks.

Reduce Costs During Periods of Low Visitation

The parks need to review visitor use patterns and calibrate expenditures to cyclical demands. The goal would be to optimize park resources by attaining a seasonally consistent visitor-to-expenditure ratio. For example, the parks annually spend hundreds of thousands of dollars on snowplowing. By reviewing snowplowing strategies at Rocky Mountain, Glacier and Lassen National Parks, the parks could realize new ways to save on high-cost, low-

yield activities. They can look at increasing contracted services, renting equipment (as opposed to purchasing it) and cost-sharing activities with other businesses interested in keeping the roads open year-round. In addition, the parks can find alternative uses for buildings during the low-season (e.g., rental, grant-funded programs, and training). The parks could possibly share staff with other parks that experience heavy demand during the winter (e.g. Hawaii Volcanoes, Everglades, and Death Valley).

Outsource Campgrounds to a Concessionaire

Expenses associated with running and maintaining campgrounds often require park staff to forego other more important tasks. Moreover, revenue generated from campground fees does not cover operational costs. Yellowstone National Park recently contracted out five of their campground operations to a private concession service. Grand Teton National Park is exploring a similar move. Sequoia and Kings Canyon should explore the pros and cons of privatizing all or part of the operations for running the parks' 14 campgrounds. Benefits include reduced costs for garbage collection, janitorial services, opening/closing procedures, and site management. Drawbacks include less control over an important part of the parks experience, reduced revenue from fees, and increased fees for visitors—which could make the parks experience too expensive for some current or prospective users.

Implement Annual Workforce Improvements

To optimize human resources, the management team must ensure precise alignment between the parks' mission, goals and strategies and their staff structure. Personnel practices tend to rely on historical employment patterns rather than on current goals and future needs. The executive team, therefore, needs to review the parks' organizational structure annually.

For example, as information technology and strategic alliances become more important and administrative tasks are achieved more efficiently, the parks need to modify roles and responsibilities of employees to reflect these changing demands. Activities to improve workforce efficiency would include a robust performance evaluation, recruitment outside the Park Service pool, training programs for skill advancement and redeployment of current staff, and leadership development. Results of this change could include a more efficient use of personnel and financial resources.

Administer New Procurement Practices

Some of the parks' current purchasing practices help to reduce operating costs. For example, the parks use a reduced government rate set by National Park Service headquarters for some vendors who sell high-priced items. Also, a recent change in the purchasing process entails giving designated employees credit cards so that they can buy up to \$2,500 according to their specific needs. Recently the parks have established a program with Dell Inc. to purchase bulk computers at a discount. The following activities may produce additional savings:

- Establishing long-term arrangements with contractors to increase efficiencies in time and expenditures.
- Negotiating better rates with large vendors by joining with other parks to purchase equipment and services.
- Refining efficiencies with the credit card system, such as collective purchasing and pick-up among staff.
- Identifying a partner corporation to donate used goods such as furniture, computers, and copy machines.
- Changing the purchasing cycle at the warehouse to optimize dollars and inventory size.



Seasonal activities such as snow plowing should be analyzed for cost-effectiveness.



Educational partnerships could allow the parks to reach more students.

Strategies for Increasing Non-Appropriated Funding

Developing and implementing marketing strategies would allow the parks to reach their audience efficiently and to spread their mission regionally, nationally and internationally.



Supporters of the parks recognize the value of their irreplaceable resources.

The parks have significant opportunities to generate additional revenue through donations, grants, user fees and enhanced visitor services. While government funds will remain limited and competitive, entrepreneurial efforts implemented by Sequoia and Kings Canyon National Parks and their partner organizations can result in new streams of ongoing, unrestricted revenue.

Identify and Implement New Commercial Services

Visitation patterns are changing, and there has been a gradual shift from overnight use to day use at Sequoia and Kings Canyon. The parks should undertake a comprehensive review of visitor interests and then provide services that respond to identified needs. New commercial services could include recreational offerings such as expanded caving, rafting, or rock climbing. They may also involve food and beverage concessions, such as a snack bar for picnickers near the Ash Mountain entrance. Other services might include a commercial photographer with a wide-angle lens at the General Sherman tree, or private interpreters that offer special tours in foreign languages.

Increase User Fees

The parks can increase revenues collected from entrance and use fees. Sequoia and Kings Canyon charge a \$10 per car entrance fee that is low relative to Yosemite (\$20), Yellowstone (\$20) and other large parks. The administration should consider alternative fee structures that will raise revenues without having an adverse impact on visitors.

Design and Implement Marketing Strategy

Sequoia and Kings Canyon do not focus on marketing, outreach and advertising nor do they have full-time staff assigned to these duties. National Parks must compete for clientele like all other recreation services.

They need to develop cost-effective ways to achieve their goals of increasing volunteerism, corporate sponsorship, visitor diversity, shoulder and winter-season park use, foreign and first-time visitors, and educational partnerships.

Developing and implementing marketing strategies would allow the parks to reach their audience efficiently and to spread their mission regionally, nationally and internationally. In order to develop effective marketing strategies, the parks must establish measurable objectives for each of the aforementioned goals and answer several questions, including:

- Does this goal require visitor acquisition or retention?
- If acquisition, should we focus on current users of other parks or stimulate demand among new users?
- If we choose retention, what services shall we provide to spur additional use of the parks?
- How do we identify and segment the primary characteristics of our target audience?
- How will we position our message to effect the desired change in our prospective visitors?

In addition to these questions, the parks must design creative and effective marketing tools for achieving the strategic direction outlined here. Such efforts will help the parks to increase their revenue streams through new corporate donors, additional visitors during winter months, and long-term volunteers. This strategy could be accomplished at minimal cost and could yield significant results.

Develop an Informal Advisory Committee

Many top nonprofit, business, and governmental agencies sustain their competitive advantage by benchmarking and sharing “best practices.” Sequoia and Kings Canyon could take advantage of similar expertise by developing ongoing relationships with high-level professionals from businesses, academic institutions and governmental agencies who can provide advice on marketing, operations and strategic issues.

Develop Stronger Ties with the Sequoia Fund

The Sequoia Fund has significant potential to raise unrestricted, ongoing revenue for the parks. With minimal investment from the parks, the Fund has increased its annual contribution to \$100,000. The Fund predicts that it could raise at least five times this amount if it worked more closely with its Board of Directors and the parks. Specifically, the Fund needs to develop and execute strategies in the following areas:

- **Individual donors** – Annual donors provide a steady stream of ongoing revenue for organizations. Many of these donors will be the same people who visit the parks. Others will include people who support environmental preservation activities in general. Identifying, cultivating, soliciting and stewarding these donors will generate funds to supplement the parks’ appropriated base budget. The Fund needs to develop vehicles for finding annual donors such as holding special events at the parks, researching individuals who give to environmental causes, and mailing outreach literature. Fund staffers also need to work with their Board of Directors to identify prospective major donors who will make large gifts through their extensive involvement with the parks.

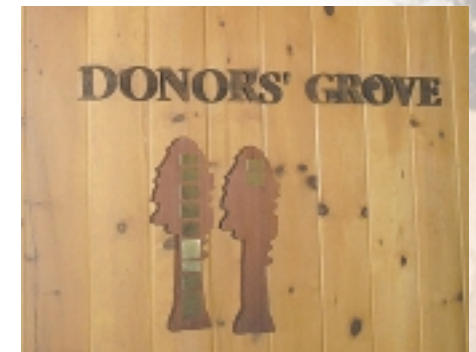
- **Foundations** – With educational programs as a top parks need, the Fund can generate program revenue through the thousands of private foundations that support education, youth and the environment. The Fund needs to work with a grant-writer to develop templates for requesting funds from foundations. The Fund’s employees also need to leverage their connections with Board members who know people that serve on corporate foundation boards and/or have their own family foundation. Additionally, the Fund can research federal departments including the Department of the Interior, the Department of Education and the Transportation Department to apply for multi-year grant initiatives which target specific parks activities.

- **Corporations** – By identifying well-known corporations, Sequoia and Kings Canyon can build long-term, mutually beneficial relationships with select companies. Benefits to the parks could include unrestricted funding, volunteers, marketing and in-kind donations. Benefits to the corporations could include increased sales and publicity, and improved staff morale. While these relationships take time to develop and require careful consideration, several national parks have found supportive and long-term corporate partners with whom they work quite effectively. Death Valley National Park and US Borax Inc. represents such a partnership.



The natural beauty of the parks inspires loyalty from the public.

Annual donors provide a steady stream of ongoing revenue for organizations. Many of these donors will be the same people who visit the parks.



SNHA honors its donors at the Beetle Rock Education Center.

Giant Forest Restoration



Before: Buildings jeopardize the giant sequoias' root systems.

The awe-inspiring Giant Forest, extending across 1,880 acres and containing 2,571 trees over ten feet in diameter, is the second largest of the 75 remaining sequoia groves. Although the establishment of Sequoia National Park in 1890 saved the trees from logging, national park status did not fully protect them from harm. Completed in 1903, the Colony Mill Road brought camping, congestion, and commercial development—including a lodge, market, and over 300 buildings—directly into the heart of the grove. This development conflicted with the National Park Service mandate to protect parks' resources for the enjoyment of present and future generations. The recognition of these impacts set into motion one of the most ambitious restoration projects in Park Service history.

The accumulated effects of nearly 100 years of tourist use and lodging in Giant Forest threatened the sequoias in numerous ways. Outdated utility systems leaked effluent into meadows and streams. Trampling and automobile use compacted, eroded, and degraded soils. Pavement remained in abandoned campgrounds. Fire, a critical factor in the regeneration of sequoias, was eliminated from the developed zone in order to protect buildings. Due to the lack of fire and the trampling, virtually no sequoia seedlings survived to maturity in the developed area. Bears attracted to food became destructive and were killed to protect people and property.

A significant safety issue existed as well. Sequoias drop their immense branches without warning, and entire trees die by toppling. In an effort to reduce hazards, the parks cut several large sequoias. Recognizing the irony of cutting sequoia trees for visitor enjoyment, the National Park Service's later efforts spared the giants but moved other trees that threatened structures.

Continued development in Giant Forest would have increased the overall negative effect on the health of the



Automobile congestion in Giant Forest in the 1930's.



After: The trees are now free to grow and expand.



National Park Service restoration experts carefully work to ensure a successful recovery in giant forest.

grove. In 1974, Park Service visionaries realized it was time for a new approach and began to plan the restoration project. This collaborative process, involving staff and community stakeholders, continued for 25 years.

The first challenge in the restoration of Giant Forest was to remove infrastructure without causing further damage to vegetation and soils. Contractors demolished structures and infrastructures, often using small equipment or hand tools in sensitive areas. By December 2000, 282 buildings, 24 acres of asphalt, dozens of manholes, a sewage treatment plant and spray field, exposed sewer and water pipe, aerial telephone and electric lines, and underground propane and fuel tanks were removed.

After the buildings were removed, staff began restoring the site. Restoration is the process of assisting the recovery and management of ecological integrity. In Giant Forest, the goals of ecological restoration were to:

- Regrade roads, trails, parking lots, and other altered landforms to approximate original topography and drainage patterns.
- Enhance soil properties to approximate those of surrounding, undisturbed soils.
- Restore the vegetation in the short term by reproducing the species composition, density, and spatial pattern of regeneration that would result from a natural fire event. In the long term, fire will be introduced back into the forest, thus enhancing the vegetation.

Years of planning, design, and construction are now converging into the realization of a restored Giant Forest. All commercial activity has been relocated

outside the grove to Wuksachi Village, a less sensitive area away from giant sequoias. Demolition of buildings is complete, and ecological restoration is underway. The conversion of Giant Forest to a day use area is nearly complete. Parks visitors now enjoy a tranquil, revitalized Giant Forest with a nearby museum, convenient parking, educational signs, and wheelchair-accessible trails. Today's restored Giant Forest is the result of many dedicated people, including heavy equipment operators, politicians, biologists and parks managers.



Before: The Giant Forest ecosystem shows signs of distress.



Visitors can now enjoy a peaceful experience among the sequoias.



After: Open areas promote healthy growth for the trees and wildlife.

Fire and Fuels Management Program: Decades of Innovation, Cooperation, & Success



Fire plays an essential role in the regeneration of sequoia trees.

Sequoia and Kings Canyon National Parks are widely recognized throughout the National Park Service as a leader in fire and fuels management. The parks protect natural resources and local communities by implementing prescribed fires, mechanical fuel reduction, fire suppression, and state-of-the-art monitoring and research. By utilizing these tools at the appropriate times with skill and flexibility, fire science professionals are successfully managing a powerful and potentially destructive natural force.

This groundbreaking program evolved over the past 100 years. In the early 20th century, the parks maintained a fire suppression policy to protect the premier parks resource: giant sequoias. However, by the 1950s, researchers working in the parks discovered negative ecological effects attributable to a lack of fire. Recognizing the need for a regular fire regime, in the 1960s rangers ignited research burns to test their hypothesis that fire could be beneficial to the forest ecosystem. The results showed the importance of fire in these habitats. As a result, Sequoia and Kings Canyon became two of the first national parks to institute a formal prescribed fire policy, which included the management of lightning-caused fires, aimed to restore healthy forests. Since 1969, the parks have used this policy to improve resource conditions on nearly 95,000 acres in 708 separate fires.



Fire staff performs a prescribed burning of cheat grass and other fuels.

Due to their demonstrated expertise in fire management, Sequoia and Kings Canyon often serve as a test site for innovative ideas, research, and new fire programs. A few examples include:

- In 1995, the national office selected the East Fork Kaweah drainage (50,000 acres) in Sequoia National Park to test the feasibility of planning and implementing a landscape-scale prescribed fire program.
- In 1999, the parks and local partner agencies established the Southern Sierra Geographic Information Cooperative to identify and prioritize hazardous fuels projects across agency boundaries, a new approach to managing fire hazards.
- In 2000, through the United States Geological Survey, the parks became part of the Fire and Fire Surrogate Study, a nationwide research project to study the ecological consequences and tradeoffs of alternative fuel reduction strategies.
- The parks, in conjunction with their local Federal partners, are a prototype development area for the new national, interagency, budget planning and analysis tool. By fiscal year 2006, this tool will replace the current fire management planning and analysis systems used by the five federal wildland fire management agencies with one common system.

The staff at Sequoia and Kings Canyon National Parks is proud of its contribution to the history, research and management of wildland fire. The parks will continue to play a major role in fire and fuels management effort and innovation for years into the future.

Devils Postpile National Monument

Devils Postpile National Monument operates under the general administration and management of Sequoia and Kings Canyon National Parks, but it is a distinct National Park Service unit with a separate budget. The 800-acre monument is located 80 miles to the north of the parks in the eastern Sierra Nevada near Mammoth Lakes, California. It protects one of the world's finest columnar basalt formations as well as Rainbow Falls, a 101-foot cascade over a cliff of volcanic lava. Due to snowy conditions at its 8,000-foot elevation, the Postpile is open to the public only between June and October.

Devils Postpile's \$190,000 annual base appropriation represents less than 1% of the total budget for Sequoia and Kings Canyon, and it covers the cost of a superintendent, a maintenance worker, and seasonal rangers and interpreters. The monument competes for project funding independent of the parks. Sequoia and Kings Canyon cover all costs for parks employees when they provide support for the operation of Devils



The headwaters of the San Joaquin River flow past Soda Springs meadow.

Postpile. All division chiefs visit the monument at least annually to work on safety, visitor experience, maintenance and natural resource issues.

Personnel resources at Devils Postpile are often stretched during busy holiday weekends, when over 2,500 people visit the monument daily. Since the ratio of visitors to staff can exceed 500 to 1 during these periods, the monument needs additional ranger and interpretive support on an intermittent basis.

Although visitation has been relatively stable at 150,000 people per year since 2000, it is projected to grow as the town of Mammoth Lakes continues to evolve into a destination for summer recreation. Previously, Mammoth Mountain skiing was the primary draw in the area, but the development of a mountain biking resort is expected to bring in more summer visitors. Visitation patterns at the monument are changing, as families from the local area increasingly use the resource for picnics and parties without visiting the falls or the Postpile itself. This gradual shift toward use patterns characteristic of an urban park will require planning for future infrastructure and resource preservation. On a small scale, the recent restoration of Soda Springs meadow is a result of such planning; new fences protect the resource and redirect visitors to less sensitive areas.

Monument staff and volunteers maintain not only the Postpile's trails, but also small stretches of connecting trail in the adjacent Inyo National Forest. The Forest Service operates a shuttle bus that transports visitors to the monument. The bus is operating at a deficit and the monument is working with the Forest Service to devise a solution that will keep this crucial service in operation without affecting the monument's financial resources.



Devils Postpile's columns formed when cooling lava cracked in geometric patterns.



Aptly-named Rainbow Falls.

Partnerships



Sequoia and Kings Canyon bring new understanding to students through its partnerships.

Partnerships provide Sequoia and Kings Canyon National Parks with numerous resources and services. Volunteers have built bridges for backcountry trails. Agency representatives have shared brain power. Donors have made contributions ranging from spare change to several thousand dollars. The potential of these relationships extends beyond discrete accomplishments. By expanding their partnership network, the parks can cultivate a community of advocates who will ensure Sequoia and Kings Canyon's future. The partners featured on these pages represent different facets of the parks' many alliances.

Student Conservation Association (SCA)

The SCA seeks to “build the next generation of conservation leaders and inspire lifelong stewardship of our environment and communities by engaging young people in hands-on service to the land.” As the nation's largest provider of conservation volunteers, SCA has placed a total of 150 student volunteers at Sequoia and Kings Canyon since 1976. Their strongest involvement has been through the Conservation Internship Program, which enables college students to perform activities such as visitor services, interpretation, backcountry patrol, bear control, air and water quality testing, and herpetology for three-to 12-month stints. With an alumni base of over 40,000 people, 60% of graduates land positions in the natural resource arena. The SCA particularly appreciates the environment that Sequoia and Kings Canyon offers its students.

According to Regional Director Rick Covington, “Sequoia and Kings Canyon offers the quintessential national park experience for a young person just starting her career. With its pristine rivers, rugged backcountry and well-managed operations, the parks

have preserved a real wilderness feeling. Few large parks have managed to achieve this fundamental quality, which makes our relationship with the parks quite unique.”

The Sequoia Fund

Established in 1986, the Sequoia Fund seeks to “fund and support projects which enhance the restoration, conservation, and enjoyment of Sequoia and Kings Canyon National Parks and Devils Postpile National Monument.” The Fund's 25-person Board of Directors, in concert with the Executive Director and the parks' Chief of Interpretation, raises over \$100,000 annually for the parks. Donations come primarily from individual donors, with periodic gifts from The James G. Boswell Foundation for as much as \$50,000. Donations support tangible and visible projects throughout the parks that promote widespread benefits to the public. To date, the Fund has contributed to the accessible “Trail for All People” in Round Meadow, the Zumwalt Meadow boardwalk, the Grant Tree trail rehabilitation, and the Mount Baxter Bighorn Sheep research program.

The Fund's Board of Directors made a long-term \$500,000 commitment to sponsor the conversion of the Beetle Rock Environmental Education Center into a fully-equipped resource for staff training, field seminars and school groups. Under the new leadership of Director Heather Douglass and Chairman Everett Welch, the organization plans to increase its budget and expand its donor base. Current goals include boosting annual donations to the parks by \$200,000 and heightening community awareness of the Sequoia Fund throughout the state. Douglass, born and raised in Tulare County, says her commitment to the Fund comes from her desire to “see future generations enjoy the wonders of this world” through their physical and spiritual connection with the mountains and rivers.



Visiting students enjoy Giant Forest.

Southern Sierra Geographic Information Cooperative (SSGIC)

The SSGIC provides collaborative planning and analysis for fire management and hazardous fuel treatment. The National Interagency Fire Center established SSGIC through a grant-funded project under the Joint Fire Science Program. SSGIC comprises five regional organizations including Sequoia and Kings Canyon National Parks, Sequoia National Forest, the Bakersfield field office of the Bureau of Land Management, the Tulare Ranger Unit of the California Department of Forestry and Fire Protection, and the Kern County Fire Department. These agencies develop joint approaches to fire management. Before joining forces, the agencies shared land borders, but they planned independently. Now the agencies work across boundaries, sharing common data and analyses available on the SSGIC website.

In three short years, the cooperative has both planted the seeds for new ways of working together and highlighted problem areas for future improvements. Program Manager Anne Birkholz sees great potential for the SSGIC. With an eye toward the future and recognition of the past, she claims “Establishing a vibrant, interagency cooperative across the Southern Sierra has positioned SSGIC to become a national leader in fire management planning.”

Sequoia Natural History Association (SNHA)

SNHA seeks to “enhance understanding and appreciation of Sequoia and Kings Canyon National Parks and public lands.” This partnership exemplifies the parks’ longest-standing and strongest joint venture to date. According to park Chief of Interpretation Bill Tweed, the parks simply could not provide the level and quality of services that they do without the cooperative efforts of SNHA.

Overseen by an 11-member Board of Directors, SNHA’s 36 personnel run the Sequoia Field Institute, publish and sell dozens of park publications, staff the visitor centers, oversee winter services at Pear Lake Hut, and lead tours of Crystal Cave. In addition, the nonprofit organization launched an outreach program entitled “Sequoia Caves,” which serves 1,000 secondary school students from private and public schools in the Central Valley.

Established in 1940, the association has grown to \$1.6 million with the majority of its revenue coming from book sales, cave tours, programs and membership. Programs range from half-day guided bird walks in Giant Forest and Cedar Grove to two-week expeditions across the High Sierra Trail. Group sizes can be two people all the way to 70 people, and include families, bus tours, and school groups. As one of 66 national organizations that comprise the National Park Cooperating Association, SNHA also partners with Devils Postpile and the US Army Corps of Engineers.

The SNHA-Sequoia and Kings Canyon partnership represents one of the finest examples of collaboration in these parks. Executive Director Mark Tilchen sees the association as a true ally of the parks. “Our mission and goals align remarkably well with the parks, and we stand ready to provide them with whatever service we can over the coming years.”



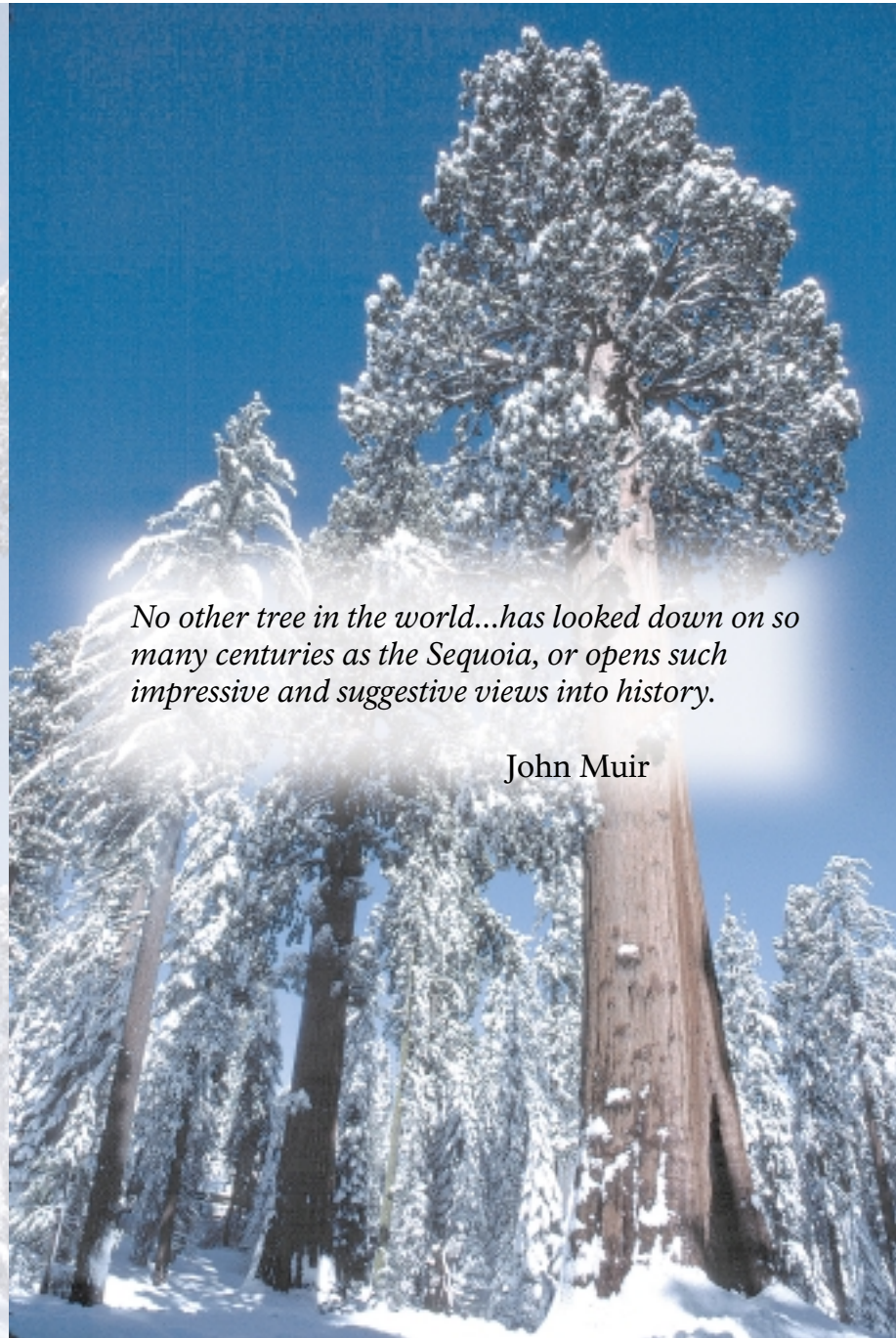
The parks' fire program collaborates with other federal and state agencies.



SNHA employees help staff visitor centers.

We thank these organizations for working with us to fulfill the mission of Sequoia and Kings Canyon National Parks.

Aldo Leopold Wilderness Institute
Army Corp of Engineers, Kaweah
Aviation Training Complex
Backcountry Horsemen of California
Bureau of Land Management
California Air Resources Board
California Conservation Corps
California Department of Fish and Game
California Department of Justice
California Department of Transportation
California Interagency Type I Fire, Federal
Interagency Fire Team
California Law Enforcement
Telecommunications System
California Native Plant Society
Cedar Grove Pack Station
Central/Southern Sierra Wilderness Group
Chevron Corporation
College of the Sequoias
Complex Control Board (CCR) R-2508MIL
Death Valley National Park
DNC Parks & Resorts at Sequoia
Eldorado National Forest
Environmental Careers Organization
Exeter Union High School
Federal Bureau of Investigation
Federal Law Enforcement Training Center
Fresno County Sheriff's Office
Friends of Dillonwood
Giant Sequoia National Monument
Grant Grove Stables
High Sierra Hikers Association
Inyo National Forest
Joint Policy & Planning Board
Kings Canyon Parks Services
Mineral King Preservation Society
Montecito Sequoia Resort
Nature Serve
Reedley College Forestry Program



No other tree in the world...has looked down on so many centuries as the Sequoia, or opens such impressive and suggestive views into history.

John Muir

San Joaquin Valley Unified Air Pollution
Control District
Sequoia and Kings Canyon Field Station
Sequoia Fund
Sequoia National Forest
Sequoia Natural History Association
Sequoia Field Institute
Sequoia Riverlands Trust
Sequoia for Youth
Sierra National Forest
Sierra Nevada Network
Silver City Community, Mineral King
Sousson Foundation
Southern Sierra Geographic Information Coop.
Stanislaus National Forest
Student Conservation Association
The Nature Conservancy
The Tulare Conservation Corps
Three Rivers/Lemon Cove Associations
Three Rivers Union School
Tulare County Office of Education
Tulare County Recycling
Tulare County Sheriff's Department
Tulare River Indian Tribe of the Tulare
Reservation California
US Fish and Wildlife Service
US Geological Survey/Biological Resources
Division/Sequoia Field Station
US Geological Survey/Mapping Center
US Attorney's Office
US Forest Service
US Investigative Services
US Office of Personnel Management
Wilsomia Historic District Trust
Wolverton Stables & Mineral King Pack Station
Woodlake Union High School
Yokuts Archeological Advisory Team
Yosemite National Park

As we reflect on our past and look forward to the future, we warmly welcome the new organizations that will join our community of partners.

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